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Handwritten signature or initials, possibly "H. B. 11" and "C. 11".

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1871  
1872









ADDRESSES,  
Speeches and Orations,

DELIVERED BY

A. A. CRAVENS.

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*Col. Burk Store Apr. 16, 1946*



## **ERRATA.**

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Page 3.—Beacon on path, should read, beacon in path.

Page 3.—Nor a bright spot, should read, not a bright spot.

Page 14.—Cherished goddess, should read, cloistered goddess.

Page 15.—Effect political preferment, should read, expect political preferment.

Page 23.—When you have a prejudice, should read, when you find a prejudice.

Page 45.—Selling when they chose, should read, selling where they chose.

Page 52.—Shaking river with its war, should read, shaking river with its roar.

Page 54.—Break its own magnitude, should read, break of its own magnitude.

Page 58.—Appeal in a calm and honest manner in their, should read, appeal in a calm and honest manner to their.

Page 82.—The triumphed snatched, should read, the triumph snatched.

Page 83.—Distrust the canon, should read, disturb the canon.

Page 86.—With a christian and virtuous mind, should read, with a christian walk, virtuous mind.

Page 89.—Have a free title, should read, have a fee title.

Page 93.—The giver of the art, should read, the gist of the art. And Lawrence Carter should read, Lawrence Coster.

Page 109.—Individual influence, should read, individual indifference.



TO THE  
NOBLE YOUTHS OF WASHINGTON COUNTY,  
WHO DESIRE TO  
ACCOMPLISH SOME GOOD IN THIS LIFE, AND WHO WILL  
LABOR FOR THE ADVANCEMENT OF EDUCA-  
TION, MORALS AND CHRISTIANITY,  
AND FOR WHOSE WELFARE I DEVOTED THE BEST ENER-  
GIES OF MY EARLY MANHOOD,  
THIS VOLUME IS INSCRIBED.





# ORATIONS, SPEECHES AND ADDRESSES.

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## SOLID.

Hope is alluring. Despondency is weakness. Labor only is successful. Youthful hopes buoy us up and move us onward. They serve to imprint deeper upon the tablets of the mind the realities in after life. When trials and adversity come pressing hard upon us, to try our strength and test our energy, despondency is the act of a coward. It twice bitters the cup of our condition with the shame of weakness and the sting of failure. But labor, ever true, brings sure reward, which multiplies our joy and sweetens our discontent. Important are the lessons of observation. Yet few will learn by example or improve by experience. Youthful days are full of dreams, and contain but little solid thought. No harm in dreaming, if we dream to act and acquire some future good. Yet most youthful dreams are but bubbles in the air—pretty for a moment, then gone forever.

Some idly suppose to become great by instinct and luck ; others to acquire fame, not earned by labor and virtue, but bought by folly and indiscretion. The solid expect to obtain success in proportion to their labor and the skill and energy with which it is applied. Time only serves to prove their judgment correct. Each day they see those, who think to navigate the stream of life in ease and luxury, sink beneath the wave of incompetency, pressed down by the weight of more solid men. They see the fop admired to-day, to-morrow despised, and those, whose native powers might have raised them to the highest stations of usefulness and honor, fail and be forgotten, for want of application. Nor is the solid student led away by that vain delusion that a mere smattering of knowledge, in this age of light and literature, is sufficient to gain success or merit applause. His opinion changes as he acquires knowledge. When entering upon his college days, he looks up through the long line of studies that lie in the college course, and imagines when he has completed them he will have knowledge sufficient for man to acquire. But when they are finished he finds that he has only learned how little he knows, and is astonished at finding he is only on the top of a little hill at the base of the great mountain of knowledge ; that the great heights of intricate and abstract philosophy, *mathematics* and astronomy are yet unascended ;

that the vast fields of law, physics and theology are to him yet unexplored. Though the work looks difficult, yet he goes at it with the determination to make each effort tell, knowing full well that reward is dealt out only to the diligent and industrious. He sees that success crowns the efforts only of the worthy. He sees that vice and morality cannot mingle, excess and frugality cannot unite, idleness and success can never be associated.

But while many are striving for the same noble purpose, yet very different may be their surroundings. The prospects of one may be bright and encouraging. The future may lie spread out before him as beautiful and as brilliant as the crystal sky when all the stars are out, and every star a hope, a beacon on the path of life. The surroundings of another may be all gloom. Penury upon one hand, and want of influential friends upon the other. Between him and the far distant object of his desire hangs the black cloud of uncertainty. From behind its dusky form not a single cheering ray breaks forth, nor a bright spot to beckon; nothing upon its hopeless face, save in darkened characters are imprinted necessity, labor, disappointment. Then must he battle with renewed vigor, for if he would be ruler he must be conqueror. Such contests strengthen his powers. Taught by experience, skilled by practice and inured by trial,

he more than proves an over-match for his less disciplined opponent.

Nor are the solid misguided by that other delusion, that all by diligence may become great men. While they drive such folly away, they yet know that each can increase his knowledge and acquire true character. Successful competition in this superior age requires men of thought and action—men who know and dare to do. Since we know the stations men will have to fill, the manner how and the qualifications requisite, we must educate to that end. This is an age of invention and progress, and must be one of reform. We want not men whose minds dwell amid the splendor and ruin of those old Eastern empires; in whose dreams float visions of ancient mythology; men who never see the bright light of the present, but are continually enveloped in the darkness of the past. We need men educated with the times, moving, thinking, investigating; men who are looking forward, whose thoughts dwell on the future. Not those, however, who rush with a blind zeal over the precipice of uncertainty, and are lost in the whirlpools of innovation; but men who, while they are advancing, exploring and shaping the future mind, never lose their grasp upon that which has been valuable in the past.

The future mind must be educated to regard virtue and intelligence as the noblest adornment of

man. Eradicate the idea, which is becoming so prevalent, and which is beginning to infuse itself into our colleges, that money and not brains make the man. Teach that those constitute the truest nobility who possess the purest motives and the highest intellectual attainments. Crown those greatest who reach the highest stations in this standard of nobility. Inspire the young to emulate their noble example. Let them know solid men are in demand; that there are always positions awaiting those who have qualified themselves to fill them well. The business men, the financiers and those who mould and control public opinion, want solid men. Science and art in all their varied branches need solid men. For none but such can with their mental vision penetrate the depths of the earth and there solve the mysteries wrought by tide and time; or ascend on wings of intense thought and measure and number the myriad orbs that deck the canopy of night. None but such can discharge well the duties of society or the requirements of state. They discard all follies and pursue only that which is elevated and noble. With consciousness of virtuous actions done, they can rest with ease amid the bowers of pleasure that shade on either side the path of life. Being pure in motive, punctual in habit, and energetic in business, they win true honor and reap the golden fruits of life.

Such should be the citizens of a free country. We can only retain our national greatness by probity and virtue. Our nation, in the pride of her strength, must not forget the means by which she was elevated. Continue to practice intrigue and deception and we must fall. Let purity, christianity and knowledge be our aim, and we shall receive the honor of being the noonday of civilization ; and when time shall fade us away, futurity will assign as symbols of the greatest pyramids for Egypt : splendor for Persia ; enlightenment for Greece : power for England ; then in letters of gold will place in the zenith of the archway of glory, virtue, intelligence and freedom for America.

**FINAL SUCCESS.**

Young Friends: You have met to celebrate, with mingled pleasure and profit, the Commencement Day of your closing school year. All nature seems to greet you. The sun lends his gentle rays to warm and cheer, the streamlets laugh and glisten; the birds sing cheerily in the branches; the air is freighted with the sweetest fragrance; the wild lilly and the rose smilingly greet you; the meadows with their flowers and grasses welcome you; the forest with its shades and breezes invites you; all nature is dressed in her loveliest attire to make your visit to her bowers pleasant. Thus will she ever greet you so long as your thoughts and acts are pure and noble. In future years, when the cares of life come pressing in upon you, you will look back to your school days as the happiest moments of your life. Grown persons, and especially business men, worried with the perplexities of life, managing their finances, studying their business, watching commerce, disappointed in speculations, deceived in trade, giving anxiety for the welfare of family and friends, if ever they gain respite from these—are sure to long for the return of school day happiness. I have frequently wondered why this is so. Then I have thought that *if men would remain as pure and true as they were*



in their school days, that school-day happiness would surely follow them through life.

Let me say to you, keep yourselves pure. Let this be the greatest care of life. Let it be your study by day and your thoughts by night. Your health will depend upon your temperance; your happiness upon your virtue. If you become impure either in body or mind, your course downward will be both rugged and rapid. Do nothing that will injure you morally or mentally. When Darius was asked by his son Arsaces what had been the rule of his conduct during such a long and happy reign, he replied "It has been always to do that which justice and religion required of me." When the spring day of youth is rapidly blending into the noonday of manhood, and the noonday of manhood is fast fading into the nightfall of age, and the shadows of past years grow deeper and deeper, as life wears to a close, it is a pleasure and a consolation to look back through the vista of time upon a life spent in purity and usefulness.

Even in the pursuit of youthful pleasure we should not become careless and thoughtless. Idleness and thoughtlessness have caused the major part of the woe of this world. We should cultivate at all times the habit of thought and observation. A little thought and observation will teach us that *the chief desire of man is happiness*. Ask the boy *with his juvenile sports* what he is seeking and he

will answer you, happiness. Ask the young man as he glides through the giddy mazes of the dance what he is seeking, and he will answer you, happiness. Ask the aged man as he toils from early morn till dewy eve, what he is seeking, and he will answer you, happiness. The boy with his hook and line, the student at his books, the mechanic at his bench, the merchant at his counter, the lawyer in his study, the minister in his pulpit, the president in his chair, the king on his throne, all, all, are seeking happiness.

Then the question arises, how is perfect happiness to be secured. Then thought and observation again teach us that the happiness of an educated mind is the purest and truest. Without an educated mind man can not fill his mission, and without filling his mission he can not be happy. All philosophy, both human and divine, teaches us that the chief end of man is to glorify God. How can he do this with an ignorant, debased, sensual mind. Education expands the mind, sharpens and exalts the faculties, refines the tastes, and opens innumerable sources of pleasure and gratification. Education alone can give to the frame strength and beauty; to the mind power and thoughtfulness; to the heart purity and virtue. Education alone can elevate man to that high station which his Creator intended him to fill.

*Unacquainted with the treachery of men, and*

the conflicts of life, you will find the future a rough and rugged road. Experience will teach you that there is nothing in this life worth contending for save a happy home, a pure heart, and an educated mind. Engage in nothing that will not strengthen your body, increase your finances, refine your tastes, or improve your mind. The young man who has a relish for knowledge can find enjoyment in his room, without being tempted to seek it at the public house. The young lady who cultivates a taste for reading can find entertainment at home without gadding and gossiping for that purpose.

"Education lifts us near to God,  
And makes us pure and true  
As sunshine lifts the rainbow  
From out the sleeping dew."

In many instances the instruction and advice given to boys and girls are too ideal and not enough real. Much of their education, and especially that of girls, has been of that character which presupposes life to be a fiction and not a reality. Grey heads must soon give way to flaxen polls. All the public offices will soon be filled with those who are now school boys, chosen by the votes of those of their own age. The school girls of to-day will preside over their households. Agriculture, commerce, and all the great problems of life will depend upon the school boys and girls of to-day. How well you shall solve these problems will depend upon your energy and perseverance in

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qualifying yourselves for the duty. Even those children whose parents are poor can conduct themselves well and acquire a good education. Those whose characters are pure and unstained, when using the proper exertions for so worthy an object, can always find those who will lend a helping hand and cheer them on. Poverty and honest employment is no reproach. Benjamin Franklin, the greatest philosopher of America, was bred in a candle factory. A Governor, Senator and President was a tailor by trade. John Jacob Astor, the wealthiest man in the Union, once carried his worldly goods upon his back like the pack peddlers along our highways. Among the ladies who have presided at the White House none have enjoyed greater esteem than Mrs. Madison, who in her youthful days drudged through the routine of a Congressional boarding-house. Jenny Lind, the world-renowned singer, was the nurse of children before her musical talent was discovered. Harriet Stowe, the woman who did more towards emancipation than all the world besides, was the daughter of a poor and humble minister.

The world is open before you ; with energy and good conduct you may expect much and hope more. Girls may expect to share the joys, cares and sorrows of the boys. They always have sought each other's company and always will seek it. Girls, as well as boys, have responsibilities to meet

and duties to perform. There is a mission for you to fill. Semiramis carried her conquests to India; provided her lands with skillfully constructed roads, canals, and public buildings of every description; embellished Babylon with magnificent works, hanging gardens and beautiful terraces; and shocked the world at the brilliancy of her schemes and the skillfulness of their execution. Joan of Arc wrested conquest after conquest from the English; delivered Orleans, and conducted the king to Rheims to be crowned; aroused the sinking courage of Charles and his soldiers; inspired the French with courage and confidence, and filled the English with fear and despair. Mrs. Hemans has charmed and delighted the readers of two nations with the melodies of her Voice of Spring, and the beauties of Palm Tree and Sun Beam. Lydia Sigourney has touched to tenderness the heart of the world with the delicate pathos of the Dying Infant, and stirred it as well with the charming sympathy of Pocahontis. Annie Dickinson has fretted away an old maid's life trying to accomplish something she can not.

Yours is a nobler mission. Your mission is to rule by love the entire sphere of human affection. When men's labors for the day are over, it is your privilege to call their minds from the gay and busy scenes of the world to the sympathy and happiness of a pleasant hearth-stone. When fortune frowns

upon them it is your privilege to administer the balm of consolation. It is your privilege to comfort in their sorrow, to exult in their prosperity, to glory in their fame, and to lead them captives from the baser world to the fields of Elysian happiness. But if you wish to be useful and agreeable to your companions you need not devote your whole time and attention to accomplishments. Painting, playing and singing are all right, but they are not the only acquirements. These may be the only essentials sought for by the giddy and the gay, but the sensible young man will seek the company of those young ladies who can comfort and counsel him, reason and reflect, feel and judge, discourse and discriminate; who can advise him in his affairs, lighten his sorrows, purify his joys and strengthen his principles.

“What’s a lady? Is it something  
Made of hoops, and silks, and airs,  
Used to decorate the parlor  
Like the fancy rugs and chairs?  
Is it one that wastes on novels  
Every feeling that is human?  
If ’tis this to be a lady,  
’Tis not this to be a woman.  
Be a woman! On to duty!  
Raise the world from all that’s low;  
Place high in the sacred heaven  
Virtue’s fair and radiant bow;  
Lend thy influence to each effort  
That shall raise our nature human;  
Be not fashion’s gilded lady—  
Be a brave and whole-souled woman.”

Young man, you have a mission to fill. You

will find life a hard, rough and deceitful journey, but with the proper efforts you may make it reasonably smooth and pleasant. The world is cursed with frivolity. The progress of improvement is impeded by thousands of aimless lives. Society is burdened and corrupted by many whose motives are impure, whose aims are selfish, whose practices are debased. Our country needs pure, true and noble young men. I believe you are actuated by a noble ambition to do good and to reach those elevated stations to which the nature of man would induce him to aspire. By the enlightenment of your minds you are introduced, as it were, into a new world, with new scenes, new beauties, constantly presenting themselves for your study and contemplation. You can measure and number the myriad orbs that deck the canopy of night. You can survey the hidden chambers of the earth, and view the secret processes going on among the rocks and roots of the trees. You can see nature as nature is. To him who understands the economy, the laws, the designs of nature, she is as fair as the morning, as beautiful as the moon, and as brilliant as the sun. The citadel of knowledge is placed upon a high hill, and the path that leads to her portals is but little worn by the foot-prints of those who have climbed its rugged steep to pay homage to her cherished goddess.

*You may meet with little discouragement now,*

but after a while the heat and burthen of the day will fall upon you. Then you will have to enter the contest against an army of shrewd and skillful men, drilled in the school of experience, and practiced in the hard contested battles of life. If you are honest in your actions, and elevated in your motives, there are those who will deride and defame you on every occasion. If you attempt to rise in the estimation of good men, and labor for the elevation of humanity, there are those so mean and so base that they would pluck every honestly won laurel from your brow, besmear you with derision, and then laugh at your misery and confusion. You will meet them, but do not be discouraged. Preserve your manhood, do not surrender. Do not effect political preferment so long as you maintain your integrity. Politics is no longer a test of principle but a game of cunning, with enough chance in it to make tricksters and demagogues the most successful. Illiterate and bloated demagogues, without a ray of talent, without an impulse of honor, and insensible to shame, wield the greatest influence. It is a sad commentary, but I would expect rather that the most cunning and unscrupulous truant would carry off the political prizes than the boy noted for his bright intellect, moral worth and noble bearing. But if you would make a permanent name, if you would make the world better for having lived in it, work for principle, for jus-



tice, for moral right, for that alone which will elevate and ennoble the human mind and heart. The names of those who by their cunning and parsimony have gained great riches, or who by intrigue and deception have reached high political stations, soon fade, or if remembered are remembered only to be despised. Invariably those whose names we revere, upon whose lives our memories long to linger, have struggled against penury, obloquy and scorn for some noble and glorious purpose.

Your characters will be moulded more or less after the fashion of those with whom you associate. There is no wrong in seeking the society and cheering words of your lady friends. The altar of religion, the hovel of the poor, the home of the unfortunate were never denied the presence or refused the sympathies of woman. But avoid the young lady who would rather be in the company of a fashionable rake and debauchee than in the society of an honest, toiling, plainly-dressed young man. Seek the company of her who is noted for brains and manners, rather than her who is noted for her beauty and ribbons.

Above all things avoid everything tainted of skepticism, infidelism or atheism. These will ruin any individual or any nation. The stream of time is strewn with the wrecks of some of the brightest intellects that ever existed. Without moral principle or fixed religion they cast their barks upon

the turbulent waters of immorality. A few years carried them over the falls of vice and they sank in the whirlpool of disgrace and degradation. Your chief desire is happiness. Seek that happiness which is the legitimate offspring of a correct judgment, a cultivated intellect, and an easy, approving conscience, as the sweetest and most permanent. Your mind is a diamond that none but yourselves can burnish and brighten. Strengthen and discipline it. Waste no minute, no moment. It will make you better, it will make you happier. It is not within the pale of time, nor within the narrow limits of this sphere, that the mind shall sparkle most, but when the earth shall tremble, when the firmament shall grow dark, when the great drama of time shall close, when all nations shall assemble; when the final awards shall be known, then it is that the pure and cultivated intellect will shine with greatest brilliancy. Keep with diligence from the bewitching sorceries of evil habits; keep your honor untarnished; do the right though to present injury; seek enough patriotism to make you love your country, and enough religion to make you good citizens; make moral courage a marked development of your nature, and obey the divine injunction "Among all your getting, get understanding."

**EFFORT.**

I shall attempt to-night what you may think a vain effort—to prove that in this county we need a higher standard of education. I perceive that the great evil is not so much a want of means as a want of effort. Upon this I base my talk. All philosophy, both human and divine, teaches us that the great aim of life is to do good and seek happiness. A fair way to measure the value of any law, principle, or usage, is to measure its effects. Examine carefully and see if it is not true, that in proportion as a people are educated, just in that proportion are they humane, prosperous and happy; and the converse, as a people are ignorant, they are cruel, improvident and discontented. Every day we see the blessings of education and the evils of ignorance. We see one person prosperous and happy, another poor and pitiful. We see vice, sorrow, pauperism and failures. There is a cause for this, there is also a remedy. We have more liberties than any other people on the globe. In climate, soil, minerals and geographical position, we have all the material elements of prosperity and happiness. Yet we have much poor agriculture, much poor mechanism, and many worthless lives. *Education is the only remedy. Education is the only means by which you can revolutionize society*

and change long established customs. We must so educate that the rising generation will prevent these failures and avoid these evils. We want to improve the present state of affairs. Instead of brier patches and barren hills we want beautiful meadows and fertile fields. Instead of cabins we want tasty and comfortable cottages. The idle and improvident want to be converted into an industrious and cultured husbandry. We want our mechanism improved. We want street loafers turned into industrious and skillful mechanics. We want careless and indifferent teachers supplanted by able and earnest workers. In a word, we want more work and less idleness, more thought and less folly, more purity and less vice.

The youth of our county are the proper objects to work upon. There is a *power* in education. Look at Sparta and see the power education had over her youths. See their patience and constancy when they suffered themselves to be whipped until the blood ran down upon the altar of their cruel goddess, without uttering a single sigh or groan. They were taught to practice theft, but if caught were punished for want of dexterity. We are told that one of them, having stolen a fox and hidden it under his robe, suffered it to gnaw out his very vitals, rather than be detected. Teach our youth that it is a sin to be idle and a disgrace to do poor work, and you will soon find a change. Teach him

early to shun the bewitching sorceries of evil habits, to shun the company of the low and the vulgar. Teach him to do nothing that will not improve his body, his purse, his mind or his morals. Point out to him those who are illustrious for their probity and virtue. Stimulate him to emulate their worthy examples by proper advice and judicious praise. Cultivate in him a healthy ambition to do good.

Who are the proper instruments to bring about this reformation? Not the old men, for they are matured in thought and habit, and it is natural that they should think the old way the best. Not that foggy class who fear all innovations, and who are as jealous for old customs as is every old woman for the reputation of her butter. I really believe there are some people so opposed to new things that they can not—as Douglas Jerrold said—appreciate the beauties of the new moon, out of respect for that venerable institution, the old one. Not the parents alone, for frequently deficiency in early education disables them from comprehending the necessity and the work to be done much less the benefit to be derived therefrom.

The teacher is the proper agent to bring about this change. Teachers can work a wonderful revolution if they will. Instead of being idle, indifferent, and thoughtless, suppose they are active, zealous and thoughtful. Instead of working upon

the defensive suppose they work upon the aggressive. The idle, indifferent teacher is despised much less respected, while the earnest, working teacher is respected if not revered. The chief reason why we teachers have not accomplished more is because we have not made sufficient effort. Are there not many of us who have been more intent upon discovering the shortcomings of pupils and the prejudice of parents, and then harping about them, than we have been intent upon devising ways to remove these prejudices and secure the interest of the pupils? We want no croakers. We want no shallow, confused, superficial education. This leads only to error and bewilderment. We want thorough, logical, practical education. Man of himself is weak and debased. True education brings him back to strength and dignity.

Frequently poor teachers excuse themselves by saying "The employers of my district are opposed to new methods and public opinion will be against me." Who cares for public opinion? Nobody but the moral coward. Public opinion is not always to be trusted. Public opinion has brought about and sustained some of the greatest iniquities that ever cursed the world. Public opinion butchered those four men in Cuba last year. Public opinion broke the French commissioner, Ogg, on a wheel, crushing every bone in a living body. Public opinion murdered Lovejoy and destroyed

his press. Public opinion drove Roger Williams into the wilderness because he preached liberty and toleration. Public opinion persecuted and imprisoned Martin Luther. Public opinion instituted and sustained the Reign of Terror in Paris. Public opinion enshrined a lewd woman as goddess of reason upon the altar of Notre Dame. Public opinion has inaugurated and endorsed scenes so sacrilegious and so horrible that the heart sickens and turns away. It is only when public opinion is enlightened and well informed that it can be trusted. Then it is an almost infallible guide. But some weak teacher, who no more comprehends the grand objects of education or feels the responsibility of a teacher than he understands theology or the science of government, mutters that he is afraid they will dismiss him. I never heard of a teacher being dismissed for doing his work too well, or for being too radical in his views; but I have heard of many being dismissed for ignorance and incompetency. What if some parents do curse you, their children when raised from the marshes and cesspools of ignorance, will call you blessed. The teacher or public officer who panders to public prejudice is not worthy of any position, and is fit only to be despised. The Superintendent that panders to popular clamor is a failure and worthless.

A teacher should not be made of the base metal

of makeshift schools. Emperor Nicholas told his engineers to lay out a railroad from St. Petersburg to Moscow and bring him the draught. When finished it was very crooked. "What is this crook for?" he asked. The engineer replied "That is to accommodate a certain city." "What is this crook for?" "That is to furnish transportation for a certain rich valley." He gave similar answers to each interrogation. Nicholas seized the draught, made a dot for St. Petersburg, another for Moscow, took a rule, drew a straight line and said, "Build me that road." Let the teacher draw a straight line from the base to the summit of intellectual and moral development, and then work close to the line. We want no moral cowards in our ranks. We want more heart power. We want a higher moral sensibility of the duty and responsibility of a teacher. A teacher should have mind enough to comprehend the present and future wants and genius enough to project a thought in advance of the age, and pluck enough to hold to it until the people come up. The teacher that would do his duty, not as ignorance and prejudice, but as humanity and justice dictate, must first know his duty, and then work fearlessly.

Our aim is not to make graduates out of all, but to make good citizens out of all, and scholars out of as many as we can. When you have a prejudice against any method or system, do not set



yourself up to fight it, but set yourself earnestly to work to undermine and remove that prejudice by good works, and mild and logical reasoning. Seek to change public opinion by reason and persuasion rather than by abuse. In your school have more method, more system, more thought, more practical work, and your school will commend itself, defeat prejudice, and secure approbation.

But I should only half do my duty did I fail to call your attention to the importance of moral culture. Any system of education that does not give especial attention to this subject is fatally defective. Are we not at the present time reaping the fruits of our false views upon this subject? Are we not sadly experiencing the neglect of proper moral culture in our low public morals, official dishonesty, legislative jobbing, and in our high-placed bribery and peculation? The greatest objection I meet against popular education is that it makes men rascals and drones. That the sharper they are, the greater rascals they are, and the more one knows the less he works. This objection is plainly the result of ignorance. It is not because we have too much intellectual culture, but because we have too little moral culture, that there is so much corruption and rascality. The Prussian maxim, "Whatever you would have appear in the nation you must put into its schools," is a good one. If we would enjoy the blessings of a rigid public morali-

ty we must teach morality in our schools. Civilization is but the ascendancy of man's moral and religious nature over his animal nature. Without moral training your instruction is partial and incomplete. It cultivates the lower faculties and leaves the higher and nobler to blight and decay. A man is what his heart is. The heart is the fountain from whence all the streams of life issue. If the foundation be not pure the stream can not be pure. Individual happiness, public utility, social purity, and national prosperity imperatively demand the cultivation of the moral as well as the mental faculties. There are many with keen cultivated intellects—reared without moral culture—who, with their degraded appetites and depraved passions, throw out upon society a far more fatal poison than the deadly effluvia of the fabled Upas. Our youths should be instructed according to the best code of morals known to the age. The Bible contains the best code of morals known to civilized man. The Bible has given us all the blessings of liberty and culture. The Bible has elevated woman from that low degraded slave that she was to that refined, venerated, beautiful being that she is. The Bible has built all our colleges, churches and school houses ; all our hospitals for the insane, the deaf, the blind, the poor, and the friendless. Its great precepts should be taught in every school room. Patriotism and true religion should find a place in

every enlightened school. The mind is the immortal part of man. If not for the good it will do here, the great moral truths of the Bible should be taught for the blessings it will secure in the great hereafter. Teachers, reflect upon this subject. The teacher's vocation is a grand vocation, and his responsibility a great responsibility. The teacher should feel that the future success and happiness of his pupils depended upon his efforts.

Teachers may respond, "To do our work well requires an immense amount of effort, for which we receive small pay and less thanks." I will admit that some get poorly paid, yet others get more than they deserve. Some men are unwilling to give the best teachers a fair compensation. Some men make money their god, and are unwilling to appropriate a cent for society or humanity. Some men are so selfish and avaricious that their bodies and souls are sacrificed in both worlds—starved in this and damned in that to come. Some men's souls are so shrunk by avarice that they would have as much room in an acorn shell as Donaldson's balloon had in Lake Michigan. Yet teachers should remember that competency always precedes wages. The true teacher shall not go without his reward. Did you see that man yonder, that toiled, and cheated, and starved to amass a fortune? Death came, and he took no more with him across the dark river than the poorest mendi-

cant that begged alms. Not so with the true teacher. His riches passed with him through time into eternity. He leaves this tenement with a mind well stored with a knowledge of this world, and rich with gems of truth, to enter that grand Institute above, and there, under the instruction of that Great Teacher of us all, to renew his search after the beauties of nature and the laws of God, throughout space and during eternity. What a grand hope! Just as you work so shall you be rewarded.

This world is just now making gigantic strides. It is stretching to its utmost ever tendon and every fibre. The world sweeps past all who can not or will not keep pace with it. It can not afford to wait for laggards. Teachers, arouse! Awake to effort! Show the world that you mean to do something worthy of the age in which you live, and part of it will get out of your way, and part of it will assist you. This is a curious world in which we live. When one is down men will kick him, but when he is going up these same men will fawn upon and lick him with as much humbleness and obeisance as a mangy cur. Determine to do something and you will. You remember when those five hundred irresolute men were assembled, pretending to be and calling themselves the government of France, when they heard that the mob was coming the next day, thirty thousand strong, to

turn them out of doors, where did that great power go for protection? They sent Tallien to seek a boy-lieutenant—the mere shadow of an officer. When he appeared before the assembly, so weak and pale was his little form that the president, fearful of their fate, asked him: “Young man, can you protect the assembly?” The thin stern lips of the Corsican boy parted only to reply: “I always do what I undertake.” Then and there Napoleon mastered France. And the next morning, from the steps of St. Roche, roared the cannon that taught the mob that for the first time it had a master. Teachers, learn a lesson. Go to your schools with an earnest purpose and terrible resolution, and you will overcome all opposition.

The enemy is making giant efforts. Ignorance and prejudice are the strongholds of the enemy. Ignorance and prejudice can not withstand an enlightened public opinion. Enlightened public opinion is not made in high schools and colleges. It is made in the common schools, around the hearth stone, in the social circle. You must work in school and out of school. You must be as busy as a politician, as firm as truth, and as uncompromising as justice, and yet as mild as a wooing lad. Teachers, listen to the entreaties of humanity, and the commands of God, telling us to *work for truth, for justice, for our youth, for society, for posterity.* Ye winds that wafted to our

shore the gems of liberty, fan in us the love of education, of private purity and public virtue, the true guardian of that liberty. Ye departed fathers that fell in the cause of liberty, break thy long silence and bid us "God speed."

You think that the individual industry, general perfection, personal purity and public virtue of which I speak can never be attained, but it is because you read the world and passing events, not with courage and faith, but with cowardice and prejudice. The world is improving in all the arts, sciences and industries, and reaching to a higher morality and a better humanity. The Pope once held the world in his grasp, but Luther broke his grip. The actions of men were once clouded in darkness, but Morse (with his little wire) split the cloud and in burst the sunlight of news. The world once slumbered in ignorance, but Faust, with a little printing press, woke it to thought and action. Once the world, outside of each man's horizon, was to him a mystery, but Watts, with a little steam, conquered distance, joined ocean to ocean, continent to continent, and made all men brothers. In a few years justice will be judge, and reason will get a hearing, then education will be decided the strongest and best guardian of liberty and protector of society. Renew your courage, double your efforts, and help fight in the cause of education. The time will come when these things will be

attained. Don't be discouraged. Remember that disastrous seige in India, when the little Scotch girl raised her head from the pallet of the hospital, and said to the sick hearted English, "I hear the bag-pipes; the Campbells are coming," and they said, "No, Jessie, its delirium." She replied, "Yes, I heard them." In an hour the pibroch broke gladly upon their ears, and the English banner floated triumphantly over their heads. Already the educational fire is kindling in the cities. Soon it will swell in the valleys, roll up the hills, and spread over the land.

Washington county deserves better schools. She is rich in all the material elements of greatness. Rich in extent of territory. Rich in the magnificence of her scenery and the fertility of her soil. Rich in her beautiful valleys, productive fields and mineral hills. Rich in her stock, her grain and her merchandise. Rich in her farm mansions, machine shops, commercial houses and manufacturing establishments. Rich in the intelligence, morality and enterprise of her citizens. But richer in her one hundred and twenty-six school houses. But richer still in her zealous, earnest, faithful teachers. Teachers, the good name of your county is in your keeping. Your work is before you; its results are eternal. May you so discharge your duties as true and faithful teachers that when that great examination day shall come, your papers will get a credit

of ten and a per cent.; that you will get eternity certificates, and receive as wages unbounded happiness and celestial pleasure.



**EDUCATIONAL REPORT.**

What is man, and what is his mission in life? are the two great questions that first present themselves in considering either temporal or spiritual affairs. Man is that strange, mysterious, wonderful link between Deity and dust, possessing earth and destined for heaven. Divine history tells us that God created man in his own image, and that he is the highest and noblest of all created beings. He is capable of sympathy, reason and culture. All philosophy, both human and divine, teaches us that the great mission of man is to do good and glorify his Creator.

Man is continually seeking for happiness. The greatest problem he has to solve, is to determine how he can do the most good and secure the greatest amount of happiness. To solve this problem correctly he needs some assistance. Education is the only true assistance. He cannot be happy without filling his mission. How can he do this with an ignorant and debased mind? Man's first great duty to himself, society and his Creator is to so qualify himself that he may thereby be enabled to procure the necessary comforts of life for himself and those that are depending upon him; and his second is to study the wishes and laws of God, *as well as the principles that govern the material*

world, so that he may be the more willing to pay him that homage and adoration which is due to his unbounded goodness and wisdom.

A true education consists, first, in the acquisition of useful information ; and second, in learning to reason and to think. The first will include, besides instruction in the text-books, instruction upon the elements of success and morals ; such as honesty, veracity, industry, energy, thoughtfulness, carefulness, method, order, self-control, and other kindred virtues which every one must practice to be successful.

We recognize this as an age of progress, not only in the arts and sciences, but especially in education. That there were many splendid schools scattered all over this fair land of ours, in which the youth were instructed in the elements of success, and were taught to think rapidly and to reason closely ; that these pupils with their keen, shrewd, cultivated intellects, would be quick to perceive the best chances for speculation and money getting ; that the boys of our county would have to compete with these, and unless they were equally well instructed, and taught to think equally rapid and reason equally close, they would be outdistanced in the race of life and become the servants and victims of these more fortunate pupils. We see daily the effects of ignorance. We see much poverty and crime ; many failures and worthless

lives. We see many failures in agricultural, mechanical and commercial pursuits that the advantages of a common education would prevent.

It is our duty, as public officers, to make an earnest and determined effort to change all this. This can only be done through the youth of our country. Gray heads must soon give way to flaxen polls. All positions of responsibility will soon be filled by those that are school boys to-day. All the duties and responsibilities of husbandry, mechanism and commerce, and the affairs of State will depend upon them. How well they will discharge these duties will depend upon their preparations now. They want to change the present state of affairs. They want to make improvement in every department of human action. We need more work and more thought. We want every department of industry improved; our houses made more pleasant, and society elevated and purified. This great work has to be done in the public schools in the education of our youth.

That education increases the productiveness of labor, no intelligent person will deny, yet few appreciate it. We need education not only as a means of improving the moral and intellectual faculties, but also as a means of ministering to our personal and material wants. The reason why man's labor is more valuable than a brute's labor is because a man combines intelligence with his

labor. In proportion as a man's intelligence increases, his labor increases in value. Mere physical power is rewarded with a small compensation, while skill and intelligence, combined with a small amount of strength, command high wages. Prof. Mayhew relates an incidence illustrating the power of education over labor :

“An intelligent farmer of my acquaintance, having a piece of greensward to break up, and having three work horses, determined to employ them all. He, hence, possessing some mechanical skill himself, constructed a three-horse whipple-tree, by means of which he advantageously combined the strength of his horses. A less intelligent neighbor, pleased with the novel appearance of the three horses working abreast, resolved to try the experiment himself; but not possessing the skill necessary to construct such a whipple-tree, he waited till his better informed and more expert neighbor had got through with his and then borrowing it, tried the experiment with his own team. Early one morning, and full of expectation, aided by his two sons and hired man, he harnessed his three horses to the plow. But one of them for the first time refused to draw. After several fruitless attempts to make the team work as first harnessed, the relative position of the two horses was changed, when lo! although this horse would draw as formerly, one of the others would not.

Another change was made, and the third horse, in turn, refused to draw. The farmer could not understand it, nor his sons, nor the hired man. His three horses, for the first, were each fickle in turn. And, what was more surprising, they would all work in either of two positions, but in the third none of them would draw. The honest farmer thought the age of witchcraft had not passed. He finally gave up in disgust, and carrying the whipple-tree home, told the story of his unsuccessful and vexatious experiment. 'And how did you harness the horses to the whipple-tree?' inquired the more intelligent farmer. 'Why, one at the short end, and two at the long end, where there is the most room for them, to be sure!' was the frank reply. It is needless to say that the power at the short end should be twice that at the long end. One horse drew against two with a double power. He then would have to draw twice as much as both of them, or four times as much as one of them."

Not every day do we see such striking illustrations of ignorance, but every day we see mistakes and failures that a little thought and care would have prevented. The difference between the work, for a day or even a week, of an educated and uneducated man is not always noticed or appreciated, *yet the aggregate of these differences in a few years make all the difference between a rich man, sur-*

rounded by prosperity, and a poor man surrounded by poverty.

These are a few of the facts I recognized when I accepted the office of County Examiner. The first work, therefore, required of me was to obtain the co-operation of the teachers, and to awake in them a true conception of their work and arouse in them a due appreciation of the responsibilities that rested upon them. Previous to this time examinations were conducted mostly orally, and without any system of grading license. Now the teachers are graded as justly and as accurately as may be. When I commenced visiting, the schools were without any system, and but very few had any programmes of either study or recitation. I prepared and furnished a programme with proper grades. It has been followed by nearly all the teachers, and has done more towards systematizing and elevating and increasing the efficiency of the schools than any other one thing that I have done. I found the schools conducted on a mere mechanical process, and the recitations conducted on the quiz system, without any original thought or investigation whatever. These methods are now nearly entirely abandoned, and the schools conducted on those methods by which information is the most readily acquired and the longest retained, ideas developed and investigation secured.

The science and history of our language was ex-

tirely neglected. Neither the teachers nor the people appreciated its importance. Orthœpy was not taught. The teachers did not understand the principles on which our language was developed, nor did the most of them believe the consonants had any sounds. The past winter I found but few schools that the pupils could not tell me what oral, written, picture, sign, syllabic and alphabetic languages were and give the sounds of all the letters accurately. I found in most of the schools a very low grade of scholarship. In most of them the pupils were studying orthography in a bungling and imperfect manner; arithmetic in a mechanical and impractical way. In grammar they were committing the words without any conception of the principles. In geography they were memorizing the text, without any inquiry into the physical causes. But very few were studying history or physiology, and none were studying word analysis. In very many of the schools the pupils were studying only orthography, reading, writing and arithmetic. These were all the pupils studied before they became too old to attend school, or became ashamed to go into classes with small pupils, and thus were they turned out upon society without information sufficient to make good citizens.

The method I adopted to elevate the standard of scholarship was oral teaching. Requiring teach-

ers to devote from ten to fifteen minutes in oral instruction on each branch. This method, where it was rigidly practiced, succeeded far beyond my expectations. I will give one illustration. In '72 I advised a teacher to commence teaching grammar orally. He did so, and also commenced a class in '73. In November, '74, I visited that school and found three grammar classes. The first class was analyzing and parsing. The second was studying the rules of syntax, and the third was an oral class, studying the parts of speech and their modifications. There were fifty-four pupils present, and fifty of them could tell the different parts of speech and parse a noun. Those that could not were under seven years of age. Fifty had slates, could write, and give all the sounds correctly. The other branches were not neglected. Many of the other schools would compare favorably in their oral work and advancement with this one. In many of the schools the pupils by oral instruction alone could answer more questions upon the different branches, and far more readily and understandingly than could others that had studied them from the text for three or four winters.

Another powerful means of toning and improving the schools have been our school-room talks. These are beneficial because the greatest incentive to earnest effort that a pupil can have is a consciousness that he is learning something new and



valuable each day. This he does at each talk. The second reason why talks are beneficial is because all the instruction a vast majority of pupils get is that received in the common schools. If they do not get in the public schools a conception of what lies beyond the common branches they never do. They are thus thrown upon society with a very faint conception of the world and nature. Talks when managed by a skillful teacher will give animation to the dullest, and fix the attention of the most restless and thoughtless. Time thus spent is profitably spent, and the lesson thus learned will never be forgotten, because it will be understood. Talks are the most powerful inducements to extend reading and investigation, because they give new ideas and arouse curiosity, one of the strongest attributes of a pupil. From these talks the pupils of many of the schools obtained a fair knowledge of the primary elements of many branches, such as the division of land into sections, towns and ranges, civil government, natural science, and important and useful principles in chemistry, philosophy, and physical geography. One who does not see for himself can scarcely believe the stimulus and interest these talks will give to a school.

The county institutes have been well attended, and the teachers have received great profit therefrom. The last institute was a decided success. I

procured the services of Prof. Hoss, of the State University, Prof. Ridpath, of Asbury University, Prof. G. L. Pinkham, of Iowa State University, Profs. May, Bloss, and Wm. Pinkham. From the reputation of these men you may judge that the work was the best that ever has been done in Southern Indiana. Besides these, several of our own teachers did splendid work. The institutes in two or three of the townships were excellent; in seven or eight they were fair, and in two or three they were nearly failures. Some of the difficulties in the way of successful township institutes are these: First—Want of interest on the part of teachers, trustees and patrons. Second—The failure of trustees to bind teachers by written contracts to attend; and also to apply the lawful remedy—deduct one day's wages. Third—The very frequent illness of the poorer class of teachers. Fourth—Non-preparation and indifference of some teachers. The township institutes, on a whole, have done much good in improving the teachers; in building up a friendly educational sentiment, and in enlisting the sympathy and interest of the people in behalf of the work and toil of the teachers.

I visited all the schools the past winter except three, and would have visited them but for sickness. The schools as a general thing did exceedingly well. As an unavoidable consequence, there

were some that were very poor. Sometimes the patrons were to blame, but most frequently the teachers were at fault. I wouldn't say that some of the teachers were lazy, but undoubtedly they were naturally tired, indifferent, careless, and did not try. When I find such I generally dispense of them at the earliest opportunity. Washington county has many excellent, faithful, conscientious teachers. I don't believe any county in the State has better. All praise be due their earnest, noble efforts.

I contemplated last year of requiring weekly reports of the teachers to the trustees, and semi-monthly reports to the Superintendent, but found that the school terms would be so short that I could not get around until the terms would close. But now under the law limiting the number of days, I would recommend reports to trustees and Superintendent. These reports will enable the trustees and Superintendent to know something of the condition of the schools, although they cannot visit them. The public schools of this county are in a good condition and are advancing rapidly. If the next Superintendent is rigid and skillful, he can soon approximate them to what they should be. For four years past I have devoted all my health and strength to the cultivation of a healthy educational sentiment and the improvement of public schools. In the future I shall always be

found doing all I can to promote the cause of education. As public officers you have a great work before you. Its responsibilities are many and its results eternal. That you will not cease your efforts until through the power of education you secure to every child a life of virtue and usefulness; to every community exemption from all avoidable evils, and a sufficient amount of this world's goods, with a disposition to use it in a way that will best promote human happiness; to every individual that tranquility and lofty pleasure of the mind, gained only by culture, every philanthropist and christian should earnestly hope and fervently pray.

**CENTENNIAL ORATION.**

When man is conscious of guilt and bowed down by sin ; when he feels that he has transgressed the Divine law and disobeyed the kind injunctions of his Heavenly Father ; when the horrors of death and the pangs of punishment torture his mind and tear his heart, then the sweetest word ever lisped by mortal tongue is Jesus. When man is bound down to abject servitude ; when he is taxed without consent, oppressed without redress, governed without a voice ; when his freedom is restricted, his property destroyed, his wishes contemned, and his petitions mocked at, then the dearest word to him is Liberty.

We celebrate this Centennial day, the greatest event in human history. Seventeen hundred and thirty-three years previous to this the old world had witnessed the most solemn and sublime scene on earth. The earth shook, the stars trembled, the sun stood still, and darkness covered the earth. The cruelties of the cross aroused the sympathies, and the agonies of Calvary tore the hearts of men. All nature groaned and shuddered. The Son of God had died, that man might live. His sacrifice was to secure man's spiritual freedom. The sacrifice we celebrate to-day was to secure man's personal freedom. We to-day are enjoying two of

these blessings. I am at liberty to say what I please, and you are at liberty to listen without molestation. Four hundred years ago the Old World slumbered in ignorance and groaned under oppression. Nothing but cupidity and curiosity could wake it from its stupor. The fabulous wealth of the East fixed the daring mind of Columbus, incited his efforts and sustained his hopes. History records no instance of greater bravery or more determined energy. Imagination fails when it attempts to paint the perils of such a voyage, the breakers of an unknown sea, and the courage it required to leave all the heart holds dear and boldly invite such dangers.

Time rolled on and thousands sought homes in the New World. The common people of the Old World in 1776 were ignorant, sullen, broken hearted, abject slaves. The rulers were haughty, insolent, bigoted, cruel masters. The vassal had often looked up from his toil and pain, and longed for freedom, but always without hope. When he heard of the convulsions of the New World a bright light broke upon the future. The colonists were in little better condition. They were writhing under arbitrary laws and restricted trade. They were denied representation and were fettered in personal liberty. The rights of property were interfered with. They were denied the privilege of buying and selling when they chose, and were

prohibited from following those vocations which were the most remunerative. They were weak, their oppressors were strong. Such was the condition of the people on that eventful July morning.

Let us now look into Liberty Hall and observe the actions and emotions of those fifty-six doubtful men. They were divided in opinion, education, and ancestry. There were fears within and foes without. They loved liberty, but feared its price. Yet they were pure, resolute and sagacious. They were about to contradict all experience and reverse all the teachings of history. Men had even been slaves and dependents; they were about to declare all men free and equal. Some were doubtful and cautious. They feared the time had not arrived to strike for Independence. They said: Let us consider. Will the people sustain us? Will they not do as other people have done—grow tired of war and submit to greater oppression? Can we sustain a long and desperate struggle? Where are the armies, the navies, the ammunition, the provisions? If we fail our fate will be terrible. We shall no longer be British subjects, but outlaws, at the mercy of irate and cruel conquerers.

Others more confident and determined, urged its adoption. They declared this a question of life or death, independence or slavery. We are already proscribed. If we fail our fate can be no worse. But we shall not fail. The people will

sustain us. Their love of liberty, their valor, their endurance will conquer. There is hesitation upon one side, and eloquent appeals upon the other. The welfare of humanity is poised upon the decision of the hour. It is liberty now or slavery forever. All is excitement; all is anxiety. The streets are thronged with men clinging to each other like bees in a swarm. They are waiting in feverish anxiety to hear the decision. All Europe is gazing at the scene with sympathy and fear. Up in the tower sits the old bell-man, with trembling hands and solicitous brow. Below is a little rosy-checked, fair-haired boy. The deliberations are slow. Members are still doubtful and fearful. The boy is restless. The old man is distressed and says, "They will never do it; they will never do it." The crowd is wild with excitement and anxiety. At last the vote is taken, the result announced, and the declaration declared adopted. The little boy claps his hands and shouts "ring!" With the quickness of an athlete that palsied hand grasps the iron tongue and swings it backward and forward, "proclaiming liberty throughout the land to all the inhabitants thereof." The crowd takes up the shout. It spreads from town to town, leaps the Atlantic, spreads over the fens of Ireland, the moors of Scotland, the vine-clad hills of France, the papal fields of Italy, and finally penetrates every nook of Europe, and in tones clear and loud



bade the oppressed to burst off the shackles of the Old World, seek a home in the New, and, under its broad, blue, arched sky, look up and believe himself a freeman.

That you might appreciate liberty more, I would like that you could feel and realize the hardships, the perils, the anguish it cost. Had I the descriptive powers I would like to paint a few scenes. When we contemplate the misery and the suffering of that terrible struggle, the heart sickens and the mind becomes bewildered. Think of a few thousand ragged, starved fugitives, fighting against hope and the combined powers of England. No clothes, no arms, no food. No friends but their strong right arms; no sympathy but that of their unhappy, defenceless wives, and hungry, helpless children. See those brave men marching in the storms of winter, cold, hungry, barefooted, every step leaving its blood-stained print upon the frozen snow. See that little army in a driving storm of sleet and snow, crossing the Delaware at dead of night in their frail barks while huge cakes of ice were grinding against each other and crushing their little boats like great glaciers crushing pebbles. Think of eleven thousand human beings starved to death in the hulks of those old prison ships in New York harbor. Imagine if you can the terrible torture, the ghastly horror, and the sickening cruelty. Then think of the helpless

women and innocent babes that were scalped and burned by rapacious savages, led on by British barbarians. When was there in the world's history such a display of bravery, fortitude, endurance and self-sacrifice? One instance will serve to illustrate the pluck and grit of which they were made. At the battle of Lexington a soldier was wounded near a vital part. The surgeon said "a little more and it would have killed you." "Yes," he replied, "and a little more it would have missed me," and immediately rejoined his regiment. Such a people no power on earth could conquer.

I fear we do not comprehend the true situation, condition, and limited number of the people at the beginning of the republic. The people then had poor resources, no tools, no manufacturies, no trades, no commerce. Nothing but their hands to begin life with in a vast wilderness. Only three millions of people scattered over a narrow strip of land fifteen hundred miles in extent. A large part of this vast extent was an uninhabited wilderness. A thin line of towns extended from Maine to Georgia. Civilization had not climbed the Alleghanies nor disturbed the savage on his native plain. Their rude implements were made by hand and on the farms where they were used. A blacksmith in those early days came into a new settlement with the intention of farming, but his services were so much needed that he improvised a forge, made a

stump answer for an anvil block, and went to work. When one of his customers was returning home he met a man who accosted him with the inquiry, "How far is it to Miller's blacksmith shop?" He answered, "You are in the shop now, but it is three miles to the anvil."

Let us see if we have made any progress during the century. We have increased to forty million people, thirty-seven States and eleven Territories. The sound of the hammer is heard, and the smoke of the factory is seen in every vale from the frozen lakes to the orange grove, from the pine forests of Maine to the flower gardens of California. The spires of school houses and churches glisten in the morning sun, of every State. Within the past century agriculture has been reduced to a science. The ground is tilled according to the directions of philosophy, and fertilized according to the teachings of chemistry. Implements have been wonderfully improved, and stock bred almost to perfection. Our fathers made every thing by hand; we by steam. They broke their ground with wooden mould-board plows, sowed their grain by hand, brushed it in, reaped it with a sickle, threshed it with a flail, ground it with a horse mill, and baked it in an oven. We break our ground with steam plows, drill it with steam drills, cut it with steam reapers, thresh it with steam threshers, grind it with a steam mill, bake it in a

steam oven, and masticate it with artificial teeth.

This century has witnessed wonderful improvements in the sciences and arts. The Yankee boy, Eli Whitney, made cotton King, and increased its production from five thousand to five million bales, and reduced the price from sixty to six cents per pound. Once it took a man all day to pick a pound of cotton; now it can be done in a few seconds.

Our provident mothers formerly spun the yarn and wove the cloth that made our apparel. Now a thousand spindles and a hundred looms whiz and clang in every important town. In every large city there is a wholesale manufactory of clothing, in which are employed hundreds of sewing machines and thousands of nimble fingers. The indomitable energy of Charles Goodyear made rubber goods, which have greatly increased the comforts of man and stimulated the arts. The genius of Elias Howe revolutionized industry and lightened the labors of hundreds of thousands of working people. Many an over-worked, pale-faced, hollow-eyed woman, who sat from morn till night, and from night till early morn, sewing their lives away, retires early and invokes a blessing upon the name of Howe.

This century has witnessed that memorable Monday, the 10th of September, 1807, when the labors and study of Robert Fulton accomplished

successful steam navigation. His boat had attracted no less attention and excited no less ridicule than the ark had received in the days of Noah. A vast crowd had assembled at the shore to witness the starting. Jokes, jeers, and sarcastic remarks were freely passed at the expense of the inventor. At 1 o'clock, the hour of starting, expectation was at its highest. The friends of the inventor were in a state of feverish anxiety, and the scoffers were ready to give vent to their shouts of derision. Precisely at the hour the boat moved slowly out into the stream. The spectacle she presented was so novel that the crowd broke out into shouts of ridicule. Soon the jeers grew silent. Incredulity was succeeded by astonishment. This feeling soon gave way to undisguised delight. The surprise and dismay of the crews of the sailing vessels and the simple people on the shore, were extreme. They thought it a huge monster, vomiting fire and smoke, lashing the water with its fins, and shaking the river with its war. Now we are accustomed to see majestic steam vessels, with their graceful prows, stately palaces, beautiful contours, gliding like huge swans over the smooth waters or mounting the crested waves.

This century witnessed the 9th of December, 1830, when E. L. Miller, amid the fears of his friends and the derision of his enemies, ran his engine "Best Friend" from Charleston to Hamburg.

That was the first train of cars impelled by steam in the United States. That successful event facilitated trade, made travel easy, and woke a wonderful activity in the circulation of the products of industry. Now huge trains of freight and palace cars speed across the continent, drawn by the iron horse. This great servant of man now outruns civilization; scares by his shrill neigh the elk in the mountains and the buffalo on the plains, while along his track towns and cities spring up as if by magic.

This century witnessed, on the 27th day of May, 1844, between Washington and Baltimore, the experiment of Samuel B. Morse's strange wires. It was on this occasion that John C. Spencer, the Secretary of the United States, asked how large a package could be carried, and if the U. S. mail could be carried in the same way! Now the earth is belted with magic wires and dotted with talking tables.

This century witnessed, on the 27th day of July, 1866, the success of Cyrus W. Field's ocean cable. A few faithful friends had repaired to Hearts Content, Newfoundland. They were up early watching in the east to see the break of day. In the gray mist of the morning a ship is seen far down the horizon. She comes nearer. Another is seen; another; another. The Great Eastern looms up. All is wild with excitement. She comes closer

and drops her anchor, having trailed behind her two thousand miles of chain. Then Field sends the immortal dispatch: "All well. Thank God, the cable is laid."

This century has witnessed wonderful improvements in printing, painting, sculpture and architecture. The difference between the Franklin press, that printed a hundred an hour, and the ten-cylinder Hoe, that prints twenty-five thousand an hour, is almost incredulous. A gentleman in San Francisco, while waiting for his breakfast, can read the proceedings at the capitol of the preceding day, and what transpired at London at 10 o'clock the same morning. Steam, electricity and printer's ink make this union possible. Americans would not live under a government that they could not hear from under six months. If it were not for these it would break its own magnitude.

The revolution in navigation and commerce, the increased facilities for travel and trade, the wonderful improvement in machinery and manufactories, the increased knowledge in the healing art, and the discoveries in the sciences, are almost miraculous. The century has witnessed wonderful revolutions in religion, politics and society. The shackles have been burst off four million bondsmen and all men made free and equal. Everywhere the new crowds aside the old. Discoveries upset established systems. The customs of one

generation become traditions for the amusement of the next. Everything that could administer to the comforts or increase the pleasures of man has been revolutionized. The American characteristics are energy and activity. Our rivers, at their spring floods, by their rush, whirl and sweep, are typical of our enterprise. The answer of the man that was wrecked on a train is characteristic of an American. When asked what he thought when the car was rolling over, said he remembered distinctly of saying, "Oh ! Lord, save us, and be in haste for there is not a moment to spare."

There is no age since Adam walked among the splendors of an uncursed world more golden than this in which we live ; no society purer, no people more free, no thoughts more unfettered. Yet, as great as our liberties are, as strong as our union is, as bright as our future appears, the public heart is not well at ease, and public virtue sits trembling on her throne. As much as noble men and women have worked and suffered for it, we have not yet our ideal republic.

The greatest enemies to popular liberty are ignorance and idle capital. The one is weak, superstitious and sensual ; the other is crafty, cruel and heartless. Unless the people are thoroughly intelligent and pure, amassed capital can buy its own laws, oppress the people and increase itself. Greedy, sordid capital corrupts the very founda-



tion of our political existence and preys upon the vitals of the State. Our public officers and legislators can soon amass a fortune if they will only become the servile tools of capitalists and corporations. When they once become polluted and crazed with the greed of gain, they will bribe men and buy votes to retain their positions. Smaller men influenced by their examples will buy smaller offices. They have thus corrupted the people, and by cunningly devised laws, have placed them in a condition to be easily corrupted. Capital in every age has ever been arrogant and selfish. It has made abject slaves of the laboring masses. It would not receive money for rent, but made them pay in labor. It compelled them to buy at chosen places. Those that had the manhood to dissent were persecuted with great vigor and executed with great cruelty. Their bodies were chained to trees as terrors to the rest. You may think there is no danger, but you may search the annals of history from the earliest time to the present moment, and I challenge you to find a single instance where a republic survived the consolidation of wealth in the hands of a few. Consolidated wealth ever has and ever will work to increase and perpetuate itself, no difference what interests of others may lie in its way. Chartered associations while competing with unorganized labor will eventually monopolize all the most lucrative branches of in

dustry. They will not only dictate to the laborer, but subsidize and control every department of the government. Of all the terrible, crushing, remorseless despotisms that ever placed its heel upon the neck of prostrate humanity, that of consolidated wealth is the most exacting, galling and terrific. Already those whose labors have produced all our stupendous wealth, enjoy the least possible portion of its blessings. In a few years such a state of affairs will exist that the rich will grow richer and the poor sink into penury and want. You need go no further than your national capital to find satisfactory evidences of the dangers which threaten your liberties. Who are those fine dressed, velvety palmed, smooth tongued gents, who throng the lobbies and committee rooms? They do not wear the tanned complexions of the sons of toil. They are not clad in the homespun habiliments of the farmer and mechanic. They are bank presidents, railroad directors, corporation superintendents. Are they induced to go there by some patriotic motive to promote the common good, or is some private scheme to be enhanced? Let the vast area of the public domain that has been voted away answer. Let the immense subsidies answer. Let the wicked tariff bounties answer. Let the fraudulent contractors answer. Idle and organized capital is more dangerous to liberty than an army with banners. One

works by ways that are dark, cunning and crafty; the actions of the other are open, bold and brave. No republic has yet gone down until it became wealthy and corrupt.

During the past we have passed through a terrible scene of speculation and plunder. I know not how any man who loves liberty and who ever heard of the terrible suffering and stern virtues of our patriotic fathers could so insult manhood and disgrace the nation, without having his conscience burn and his heart wither within him. Amidst so much corruption it is an additional disgrace to our age and the civilization of which we boast, that true and faithful public servants are discarded or dismissed for preferring their duty to compliances with the clamor of cliques or the intrigues of their superiors in office. A free people should frequently appeal in a calm and honest manner in their own judgments as to their own best interests. It is too much the temper of our people to be insensible to the approach of danger. A wise and prudent people will be aroused at the least indication of danger. No man can afford to be liberal with his conscience, no woman with her honor, and no people with their liberty.

Our public schools are our greatest safeguards. Republics cannot live without brains. Despotism cannot live with them. Ignorant people can be *governed by force only*. Intelligent people gov-

ern themselves. Let the one hundred millions of people, which will soon crowd in our cities and swarm in our valleys, be sunk in ignorance and no power on earth can save this union. Intelligence is the only power that can control their passions and reconcile their conflicting interests. Our danger is from within, but not from without. We have power to protect ourselves against a foreign foe; but what power can protect the people against themselves? The safety of a republic depends not upon the extent of its resources, not upon the wisdom of its statesmen, not upon the number of its soldiers, not upon the sagacity of its generals, but upon the purity and intelligence of its citizens. Would you see the best and most glorious government on earth, I would show you one where the pride of its people is purity of character, where sobriety is the rule of life, where the children are gathered in christian schools, where the voice of prayer goes heavenward, sustained by faith in God and hope in immortality. Despots and demagogues will attempt to weaken and destroy our public schools. Watch with suspicion the man or party that would detach the weight of a straw from their efficiency. He is a cold, sordid malefactor that would do anything in opposition to them, and he is not a good citizen or a true christian that does not do all he can to promote them. Destroy our schools, and liberty will die; promote

them, and it will ever flourish and grow strong.

Our young men should study the lives and teachings of those sturdy fathers who founded the republic. What resemblance can you find in the present generation to those great and good men, so true and faithful to their country, so abstemious and self-denying to themselves? They transmitted to posterity examples of virtue and fidelity. They took part in the affairs of State, not to enrich themselves, but to promote the public welfare. While we have had much corruption, many have been punished. Our young men will learn wisdom in money getting. They will learn that indolence and indulgence are infamous, that industry and abstinence are noble.

Hope blooms upon the faith that a healthy educational sentiment is growing, and that intelligence is increasing. This is the greatest assurance that our free institutions will be transmitted from generation to generation. Another source of gratification to every lover of his country is that the bible is read and studied more and acted upon more by men as their rule and guide. Place the map of the world before you. Point to where freedom lives, to where social happiness and national prosperity exists. There the bible is most read, and truth streams from its sacred pages with divine illumination into the minds and hearts of men. There the religion of Jesus Christ achieves its

greatest victories and exerts the most salutary and beneficent influences over the hearts and lives of men.

What is our country of which we are so proud and which we love so well? It is not our vast extent of territory, not our fertile fields, not our broad prairies, not our glory-capped mountains. It is not our fabulous wealth, not our rich mines, not our extensive commerce, not our wonderful manufactories. It is not our forty million active, stirring people. The country which we cherish is the valor, endurance, and noble deeds of our fathers; the patience, fortitude and christian virtues of our mothers. The country of which we are so proud is our schools, our art, our literature. The country which we love is our free institutions; and above all our personal freedom and religious liberty, our present pride and future hope.

Are we making the best use of our liberties? Are we abusing our precious privileges? Woe unto us, if through unfaithfulness or unworthiness we let our liberties pass away. It is the duty of every man to take upon himself his share of the cares and burdens of government. May every American so think and act that our union may be strengthened and loved, our constitution revered and our laws respected. During the next century may liberty renew her youth and beauty in our midst. May white-winged peace hover over us,

while happiness and prosperity spread their banquet and feast around every hearthstone in the land. May this land continue to be an asylum for the oppressed, the home of liberty, and the hope of the world.

**MASONIC TEACHINGS.**

Out upon the Pacific's vast expanse, to the north-east of Australia, a great barrier reef rises from unfathomable depths and traverses the ocean for more than a thousand miles. Long lines of breakers dash against it with prodigious force, and mighty billows, piling upon each other in accumulating grandeur, fall thundering against it. Yet, it stands majestic and defiant. So Masonry stands boldly out in the seas of human passion and human weakness. Against this noble institution prejudice, misrepresentation and jealousy break with all their force, and the powers of malignity, persecution and slander thunder against it. Yet it stands beautiful and grand, noble and heaven-like. It stands because it aims and teaches the greatest good to man.

Every good and true man, and every man pure at heart, loves to meet and mingle with his brethren. Every true Mason is proud of this privilege, and proud of the institution. He is proud of the privilege, for its membership is considered an honor to be coveted. He is proud of the institution because its aims are openly vaunted by its members as something to be praised. When weary and worn with the busy duties of life, when overtaken by trouble and affliction, when despair



hangs heavily like a pall over his future prospects and almost darkens the last ray of hope, when the outside world has no charms which can call his mind from brooding over some misfortune, then he retires to the Lodge to receive the sympathy of his brethren and renew the bright aspirations which flow from buoyant spirits, and renew the joy which springs spontaneous from a happy heart.

Masons work for the consolation and happiness of each other, and boast of it. As such a fraternity it has existed unchanged for centuries. Masonry has survived the corroding hand of time, because it teaches the practice of every virtue and has for its foundation the wisest regulations of Heaven. Because of its noble aim and glorious works it has commended itself to the wise and good of every age and clime. The same great lessons of brotherly love, relief and truth that were taught upon the highest hills and in the lowest vales by our ancient brethren, are still revered and inculcated by us in every Lodge from the frozen shores of Alaska around the world to the pasture fields of Australia.

Let us see what some of those lessons are. The first great lesson we are taught in Masonry is a belief in the Supreme Being (for no Atheist can be a Mason); and the last great lesson impressed upon our minds is faith in a resurrection and hope in immortality. We are taught to practice that temperance which renders the body tame and govern-

able and frees the mind from all allurements of vice. We are taught to maintain that noble and steady purpose of mind which enables us to have that faith in God and hope in immortality which shall raise us from the dead level of sin to a living perpendicular of righteousness in that holy of holies within the portals of paradise. Masonry teaches us not to rely upon human strength, but before entering upon any great and important undertaking to invoke the blessing of Deity, that we may have wisdom to conceive, strength to perform, and that our work when finished may present a complete and beautiful whole.

In order that we may not materially err, we are taught to emulate the examples of St. John the Baptist and St. John the Evangelist, who were perfect parallels in Christianity as well as in Masonry—keeping within the boundary line which marks our duty to God and man, ever observing the designs laid down in the spiritual trestle board, the holy bible, which points out the whole duty of man. Masons are constantly reminded as they hasten over the tessellated pavements of this fleeting and checkered existence, that eternity is before them, hell beneath and heaven above. We are taught to regard every man for his personal worth and merit, and not for his wealth or station. And also that virtue and knowledge constitute the true basis of all honors. We are taught an important

lesson of equality in Masonry. The rich and the poor, the exalted and the humble, all meet upon a common level. This does not destroy those social gradations of rank which have been instituted by usages of society, for every man is entitled to all the respect which rightfully belongs to his station. Masonry teaches us to fill the mind with a knowledge of science and the heart with brotherly love, morality and charity. Every man, and especially every Mason, should devote a portion of his time to the study and contemplation of the glorious works of God, that his conception of the divine creator may be expanded and that he may be the more willing to pay him that homage and reverence which is due his unbounded wisdom and beneficence. Masons are taught to study the science of the spheres, the situation of the fixed stars, the phenomena arising from the annual revolution and diurnal rotation of the earth, and to encourage the studies of astronomy and geography and the arts depending upon them. When we lift our eyes beyond the boundary line of the globe upon which we dwell to that boundless firmament above where suns innumerable shine, and planets roll their ampler round, and behold worlds 1400 times larger than our own flying through space at the rate of 30,000 miles an hour, we are inspired with the most exalted ideas of the powers of the divine *Creator* and delighted with the grandeur and mag-

nificance of the universe that his hands have formed.

We are taught to avoid all hypocrisy and imposition, and never attempt to palm off the works and merits of others as our own, ever remembering that the specimens which we bring from the quarries of life will be carefully examined by the grand overseer above. We are taught to humble ourselves that we may be exalted, observing that purity of life and conduct which is essentially necessary to our gaining admission into that celestial lodge above. Masonry is so far interwoven into religion as to lay us under obligation to pay that rightful homage to the Deity which at once constitutes our duty and our happiness. Masonic friendship is the cement which unites us in one common brotherhood, so christianity is the divine cement which shall unite us as living stones in that spiritual building, that house not made with hands, eternal in the heavens. As such the Masonic system exhibits a stupendous and beautiful fabric founded upon universal benevolence and the great truths of the bible, which gives it that peculiar identity as a society of friendship and a system of morals, and which it behooves every member to diligently ponder, inwardly digest, earnestly teach and faithfully practice.

This beautiful fabric is supported by five great pillars. The first teaches us that we should never hesitate to go on foot and even out of our way to

serve and assist a fellow creature in distress, but more especially a brother, that indolence should not cause our footsteps to halt nor wrath to turn them aside, nor a selfish motive to stay us from executing benevolence to a worthy brother. If the world was less selfish and more humane and more willing to relieve an unfortunate and distressed creature, it would be better and consequently happier. Many of the burdens of life would be lightened, sorrow suaged, torture of mind and body lessened, and life itself made brighter and sweeter.

The second teaches us that when the strength of man fails there is an inexhaustible supply above rendered to us through the power of prayer. That when we offer up our petitions to Deity we should remember our brother's welfare as well as our own. That whatever our troubles, whether shattered in fortune, pained in body, tortured in mind or broken in heart, we should lay them before the Great Master, that our burdens may be relieved and future errors and misfortune avoided.

The third teaches us that we should keep a brother's secrets as we would our own, for if we betray him we might do him an irreparable injury, and it would be like the villainy of an assassin who lurks in the dark to stab his adversary when unarmed and least prepared to meet an enemy. *To tell our own secrets is folly without guilt, but*

to tell those of another is treachery and criminal. If a fool knows a secret he tells it because he is a fool, but if a knave knows one he tells it when it best serves his interest. Tattling is the bane of any neighborhood. Who can describe, who can enumerate the instances of strife, broils, contentions, crime and even bloodshed, that have arisen from the vicious, silly habit of gossiping and tale bearing.

The fourth teaches us that we should be ever ready to relieve the necessities of a worthy brother and save him from sinking. That we should support a brother's character in his absence as well as in his presence. That we should not revile him ourselves nor suffer it to be done by others if within our power to prevent. The usual custom of the world is to aid and fawn upon a man when he is successful and prosperous, but when misfortune overtakes and humiliates him, distress harasses him and sorrow weakens him, then it derides and deserts him. The true and humane way is to strengthen, support and encourage him.

The fifth teaches us that we should ever caution and whisper good counsel in the ear of an erring brother, and in the most friendly and private manner remind him of his errors and aid him in his reformation. It is said that the friendship of mankind is intercourse of interest and not of soul. Those who in the common course of the world call

themselves friends, and whom you may probably think such, will never tell you of your faults, but on the contrary are more desirous of making you their friends than proving themselves yours, will both flatter and deceive you. You may be sure that he is your true friend who in private tells you of your faults, for he adventures your dislike and hazards your hatred, and none but true friends have courage to do this.

No lady should ever object to her father, husband or brother being a Mason; it will make him more loving and attentive and a better man. None on earth are so strongly regarded or so securely protected as the wife, mother or sister of a Mason. They should never object to him attending lodge. No immoral or wicked influences are there; no dark revels nor midnight orgies are there; no words of wrath nor vituperation are heard there. They hear nothing but peace, relief and brotherly love. They are under no influences but those which are refining in taste and elevating in morals.

As the body without the spirit is but a piece of moulded clay, so Masonry without the vitalizing powers of charity to man and love to God is but meaningless symbols and empty ceremonies. Every Mason should be desirous of finding knowledge and should diligently search for it. If he would know the real design of Masonry he must study *and meditate* upon what he hears in a lodge.

Every Mason should understand his own weakness and powers of restraint, otherwise he can not live as the order requires, in the bond of the closest friendship and love with the whole brotherhood. Every Mason should take pride in walking within the parallels of morality and brotherly love that the light of Masonry may rise higher and shine brighter as time rolls away.

Masons should work and act that each and all may pass through the three steps of youth, manhood and old age, with the pot of incense burning brightly upon the altar of a pure heart; ever working as busily as bees in strengthening their virtues and in fulfilling every Masonic duty; ever guarded in thought and action, remembering that justice will soon overtake them, as the all-seeing eye searches the inmost recesses of every heart; that the anchor of faith may hold us into the arch of a well spent life, which will waft us over the tempestuous seas of trouble into that peaceful harbor where the weary are at rest and sorrows are unknown. The hour glass reminds us how swiftly the sands of life run, and that the scythe of time will soon cut the brittle thread of life and drop us into eternity. The spade and the coffin bring to us the solemn thoughts of death, which are dark and gloomy, but the sprig of acacia revives in us the everlasting spring of faith in the merits of the son of the tribe of Judea, which strengthens us to



look with confidence and composure to a blessed immortality.

May these teachings inspire us to nobler deeds and encourage us to live more exemplary lives. May we learn better how to discharge every duty devolving upon us with fidelity and honor, so that when the events of time shall be ended and the retributions of eternity begun, we may be deemed worthy to enter the doors of the Celestial Lodge, and be adorned with never-failing jewels, and advanced to glories far more resplendent than the mind of man has ever been able to conceive.

**MASONIC ETHICS.**

The primary objects of Masonry are morality, friendship and charity; morality, because without it there can be no friendship; without friendship there can be no charity; without charity man can accomplish but little good, and is selfish and unhappy. The object of the founders of Masonry was to unite the wise and good in a bond of union for the promotion of brotherly love and the pursuit of scientific knowledge. We do not hesitate to spread before the world the teachings and purposes of our institution. We submit them freely to the most rigid investigation. We proclaim them as the principles by which we are governed, as the foundation upon which we build, and as the rules by which we work. We challenge the most severe critic to point out anything in the laws of Masonry inconsistent with a perfect life or pure religion, or anything that will conflict with man's duty to himself, his neighbor, his country or his God. A knowledge of the forms and aims of Masonry is useless if we do not conform our lives to them. It is not enough to know the doctrines and teachings of Masonry, we should reduce them to practice. The zealous Mason tries to the utmost of his power to free himself from all vices, errors and imperfections.

Speculative Masonry is a cheerful practice of

those beautiful principles of morality, religious fidelity, and kind offices of charity, whence the order will be celebrated for harmony, purity and usefulness. A knowledge of signs, words and tokens—without a knowledge of the principles and teachings of Masonry and a desire and effort to practice them, and to live to the full measure of them—can no more make a man a Mason than the enrolling of his name upon a church register can make him a christian. The lodge is a happy place of meeting for worthy members and brothers who love each other, and who encourage each other to render aid in time of need, and who animate each other to acts of virtue and benevolence. Masonry requires a certain degree of justice and perfection. It is not sufficient that one belongs to a lodge and claims its benefits, he should be just to all the brethren and perfect in the exercise of every Masonic duty. Perfect conformity to Masonic morals constitutes real goodness and should be the constant study of every perfect and accomplished Mason. There is beauty in every symbol and in every lesson. We are too negligent in searching for those beauties and too apt to forget them. We are apt to forget that bending our knee in prayer is typical of our fall in Adam, and our rising is typical of our redemption by the grace of God, through whose help we are enabled to raise our *hearts to heaven.*

A Mason's conduct should be squared by strict rectitude and justice toward his brothers, his meetings should be marked by the level of courtesy and kindness, his actions distinguished by the plumb of integrity and sincerity, that his parting may be remembered with a hearty well wish. He is to avoid all intemperance and excess, which might prevent him from performing the laudable duties of the craft, and thus reflect dishonor upon the fraternity. As the columns of the builder stand perpendicular by the plumb, so should a Mason stand before the world, inclining neither to avarice nor vice, to malice nor revenge, that his work may be square work and square work only, and stand approved by heaven and by men. Every Mason should be just to himself and to others. He should endeavor by the exercise of industry and economy to provide for his own wants, and abstain from all excesses, keep a tongue of good report, and a character unspotted before the world.

Masonic friendship requires us not to deceive him who relies upon us, but to raise ourselves above the meanness of dissimulation and duplicity. It requires us to make the words of our mouths the intentions of our hearts and to faithfully perform that which we promise. Friendship above all other ties binds the heart, and a true friend reckons you as himself. A Mason ought to conduct himself out of the lodge as well as in it, as a

brother toward a brother. It is said that when adversity flows, love ebbs, but friendship stands unmoved. A true friend will reprove you to your face, while others are defaming you or ridiculing you behind your back. He will defend you when slander is aiming its poisonous shafts at your reputation. When misfortune overtakes you and others are forsaking you, he will prove himself your friend by helping you bear the burdens of your afflictions. When sickness weakens the body and wears the mind, he will administer to your wants and cheer your spirits. Young says, Angels from friendship gather half their joy.

Masonic charity regards all brethren as the children of one Great Father, bound together by the ties of brotherhood. Every member is bound by piety, morality and fraternal bonds to minister to the wants of the destitute and afflicted, and that all may be able to do this it enjoins industry and frugality. The charity of a Mason should be similar in quantity and quality to the charity of the Mason's God. Consider for a moment the charity or love of God for his creature man. Think of his love in giving to man the light of the sun, and the blessing of his peculiar rising and setting. Think of his love in giving to man our peculiar atmosphere, with its life-giving elements and purifying winds. Think of his love in giving to man this beautiful earth with its change of seasons, green swards,

limpid streams and fragrant bowers. So the true **Mason**, with his compass of affection, circumscribes a circle which includes the whole brotherhood and all the Masonic duties. The **Mason's God** looks beyond rank and fine apparel and looks only at the heart; so the zealous **Mason** looks at the actions of his brethren, the only true mirror of their hearts, and freely bestows his charities upon the worthy. He that is unwilling to give a portion of his time and riches to the needy is miserly and miserable indeed. Masonic charity instructs us not to injure our neighbor or brother in any of his transactions, and in dealing with him to act with justice and impartiality. It prohibits us from publishing any tales of infamy and instructs us to rebuke all defamation. If all members would live to the full measure of Masonic duty, the order would be more potent for good and its lustre would be more universally admired.

Masonry teaches us that we owe a duty to **God**, which includes a reverence for his name and an obedience to his commands. Masonry is a science which includes many things useful to man, and should be diligently studied, for it corrects the heart and makes it susceptible of mild impressions. Its injunctions, if daily followed, make its disciples true men and good citizens. It affords a wide range for charity, and opens a large field for scientific inquiry and investigation. **Masonry teaches**

us to practice those virtues which assure us that we shall be called from labor on earth to refreshment in heaven. Our hearts should glow with continued warmth of gratitude and love to the great and beneficent creator for the measure of health and strength we receive and the manifold blessings and comforts we enjoy. We may boast of Masonic doctrines, its principles and privileges, we may decorate ourselves with gaudy emblems and costly jewels, but if our Masonry is destitute of gratitude to God and charity to man it is but a shell, a sham and a fraud. Masonry inculcates brotherly love and charity, it tends to soften the ill feeling toward those who differ from us in politics or religion; it aims to harmonize our hearts and minds, and to produce that genial feeling and christian charity which suffereth long and is kind, is not easily provoked, thinks no evil, rejoices not in iniquity, but rejoiceth in the truth, beareth all things, endureth all things. Every Mason should impress upon his mind the importance of those great lessons, which have been transmitted to us through many centuries, amidst trials, troubles and the bitterest persecutions. We have received them untarnished by idle curiosity and unchanged by time or revolutions, let us deliver them in all their beauty, purity and perfection to succeeding brethren, confident they will never be placed in *the hands of the unworthy.*

## ADDRESS.

Man is a mystery. Life is a medley. Who made man? What for? What are his aims? What is to be his destiny? An intelligent purpose and ultimate success depend upon a proper solution of these questions. When crime and deception are running riot in this beautiful land, when the spirit of speculation and adventure is abroad, and the desire for gain is stimulated to the highest pitch, when Mammon stands with seducing smiles, while fashion, pleasure and preferment everywhere allure, where marts are ostentatiously opened where moral poison may be purchased, when blasphemy is boldly aroused and the scriptures openly ridiculed, when the den of the skeptic and atheist yawns for the unwary and thoughtless, when infidelity poisons every atmosphere and its subtle venom stings every soul, it is time every lover of purity, society and liberty should seriously reflect and intelligently act.

As the most mortal chillness begins at the extremities, so the lower classes are the earlier victims, but soon the malady will afflict the most elevated. All science, philosophy and reason tell me that God made man and made man to glorify him by aspiring to perfection and approaching nearer and nearer his Creator's divine qualities.



God placed man in this world solely to prepare for a life to come. When contemplating our melancholy changes, when the chill of disappointment runs through the heart, when our affections are robbed of their fondest treasures, when each revolving year steals something from our little stock of happiness, the thought strikes us with terrible force that the mournful ravages which time has wrought upon the objects of our attachments will not, can not be repaired by time in any of his future rounds. The pleasures of earth are vanishing, the works of nature are changing, the monuments of art are crumbling, and I look in vain for durability on every object upon which I can cast my eyes. Is there nothing to cheer, nothing to sustain the sinking heart? Yes; reason teaches me that man is immortal. Are all our interests crowded within this brief span of life? Are these few fleeting years of sorrow, passed in ignorance and fruitless desire, all there is of us? The strongest earthly mind is just budding into wisdom; is there no time when it will expand and ripen into full maturity? If the mind of man is not immortal, instinct would have answered all the purposes of his present being, and saved him all this feverish solicitude, this deep anxiety, this wearying care for his future welfare. Man can meet death with composure only when his mind is irradiated with *the hope* of a happy immortality.

Where man's future abode is I am not anxious to know. I only believe that in heaven every sense and every organ will be an inlet of celestial glory. In that happy land there will be bodies without pain, eyes without tears, and hearts without sin. There nothing will afflict the body or torment the mind. There flowers and freshness carpets the plains with ever living green, and perfumed ether robes the fields in purple glory. There the saints of earth, robed in white, with psalms of victory and songs of praise, promenade the swards of never-fading green; bask in the sunlight of joy and feast upon everything that will delight the eye or regale the senses. But the great well-spring of joy will be the intellectual feast arising from discovering truth and from understanding the laws which govern the universe, and the spiritual feasts arising from the companionship of saints and the intimate communion with God. There every capacity of their natures will be filled with unceasing joy forever and forever.

**Who would live always away from his God,  
Away from yon beautiful heaven, that blissful abode.  
Where rivers of pleasure flow bright o'er the plain  
And the sunshine of glory eternally reigns.**

Man sinned, rebelled. How shall he gain that blissful abode? Christ came to satisfy the violated law, to cheer us and to set us an example. Born in a manger, bred to human industry and devoting his energies to the welfare of others, his was the

most striking example of the model life. The greatest of earth, the humblest in walk, abounding in wisdom, teaching in simplicity, possessing power, practicing mercy, he was the most illustrious and glorious character that ever trod the earth. The final consummation of his mission was a scene the most touching and sublime. See him tortured with the crown of thorns and bending under the burden of the cross. Dying of pain, and burning of thirst, he met their scorn and mockery with "Father, forgive them, they know not what they do." That was a scene that nature could not witness without a shudder. A scene the Creator of the universe could not view unmoved. The laws of the universe were suspended, the sun stood still, the earth quaked, and a mournful darkness shielded nature from the awful sight. What a moment was that to poor fallen man! A world redeemed, the sting of death removed, and the triumphed snatched from the grave. The doctrine of redemption is the most beautiful and cheerful that ever illumined the mind of man.

But infidels tell us this is all a cheat and a delusion. That the bible is a fraud, religion a sham, the prophets liars and Christ an impostor. I believe the bible to be true. I believe the old testament to be true because it was received and sanctioned by our Savior and was regarded by him as the word of God. Because since the time of

Christ the Jews and christians have been spies upon each other, so that if either were disposed to distrust the canon of the old testament it would be impossible without instant exposure. I believe the Books of the new testament because they are quoted in the books of the earliest writers, as of divine authority and were read in the primitive Churches as a part of the inspired word of God. Because they stand all the tests by which critics detect spurious writings. Doubts were not raised at their first appearance as to whether they proceeded from the authors to whom they are ascribed. The immediate friends of the authors did not deny them to be their works. If not genuine they are forgeries. But forged by whom? when? where? If forgeries how are we to account for their original reception? The sacred writers were individually good, virtuous and holy men. If the books are not authentic they are forgeries, and their authors are forgers, impostors and liars, and we have the strange anomaly of good forgers, virtuous impostors, and holy liars. Ancient heathens, infidels and heretics did not deny the authenticity of our sacred books, but argued from them in opposition to them. The Jews and early christians were satisfied of their genuineness. The bible is a book of facts better authenticated than any heathen history; a book of prophecy confirmed by past and present fulfillment; a book of poetry of the

most transcendent beauty; a book of philosophy unexcelled by finite works; a book of doctrine unsurpassed as a guide for the perfection of human happiness; a book ever fresh and interesting, never exhausted, though continually supplying food for the mind and material for spiritual nourishment and growth. Bible truths are the greatest of all truths. They are deserving the most earnest attention because they most solemnly interest mortals. The bible tells them what they are and what they must be; what God has done for them and what they must do for themselves. It shows their duty here and their prospects hereafter. It shows them the rising dead, the assembled worlds, the open book, the final awards. These are truths upon which the christian should plant himself and look far down upon the questions of this world as upon the trifling pursuits of time.

I believe in free thought and investigation, but I am not willing to cast away the bible and grope for a guide and chart among the dark and gloomy doctrines of every creedless Christless skeptic. What have they to offer us? What would they substitute for that church? Who would they place instead of that holy minister? Would they point us to France? There they abjured their God and gathered their idols from the brothels. They burst the bonds of society and decency. Crime and *anarchy* ran wild, until the blood of their friends

extinguished the flame of their zeal. There the blood of genius and virtue deluged the scaffold until the executioner of to-day became the victim of to-morrow. I must see better examples than modern infidels before I would forsake the christian's God. I must have some better philosophy than the raving blasphemy of infidels before I would reject the teachings and promises of the bible, which were the guides of my youth and to which I shall look for consolation in my mature years. I would not exchange the admonitions of the pulpit for the war-whoop of the fiends who erect their altar upon the ruins of society and dance around the polluted bodies of their victims. He that would destroy our faith in God and our hope in a happy future would destroy every support of human weakness, would pluck the only treasure from the hand of poverty, would wrest the only staff from the feeble grip of age, and tear from the afflicted heart every solace of its woe. Until something better is substituted for the flimsy and gloomy philosophy of infidelity, let the ensign of christianity wave above the ruins of infidelity and superstition as the safeguard of morality and the harbinger of peace and happiness in the great hereafter.

Believe no one who says the friends of virtue, honesty and liberty are the enemies of the bible and christianity. I prefer peace to strife, chris-

tianity to anarchy. Christianity made us all we are. I shall admire its moral beauty if I fail to practice its mandates. I shall believe its teachings and solace myself with the hope that I shall enjoy the company of the good and wise of every age and clime. If deceived I shall be deceived with Milton, the greatest of poets, with Newton, the greatest of philosophers, with Bacon, the greatest of logicians, and with Washington, the greatest of politicians. If deceived I shall be delighted with the society of my companions. If christianity is a cheat I shall content myself with the allurements of its promises. If christianity is a sham I shall have the benefit of more satisfaction in this life than the infidels and be equal with them in that to come. When the spirit by the sweet impulse of hope soars as upon eagle's wings above the slums of life to gaze upon her future home, she beholds its beauties continually increase and its splendor grow more and more intense. The highest aim, the noblest object to which man can aspire is to pass through this life with a christian and virtuous mind and a pure heart, that he may bid a happy farewell to the scenes of earth as he crosses the threshold of eternity into the temple of his God.

## ORATION.

Americans should always regard it a sacred duty to commemorate the anniversary of their Independence ; not as a day in which to seek pleasure and recreation, but to study and contemplate the trials and sacrifices which won their liberties, and to weigh and consider the means by which they may be perpetuated. Courage, endurance, and purpose won their liberties. The same virtues will perpetuate them.

A large proportion of Americans, raised in peace and comparative luxury, do not realize what those hardships were. Let me show you a picture. See a little band of christians, driven from happiness to despair by the oppressions of the Old World. See them embark upon that lonely vessel, the Mayflower, to try the perils of an unknown sea. See the tears, hear the sobs, as they push from the shore, and bid a long and last farewell to friends and their native land. See them floating slowly upon a calm sea, with deep anxiety and a thousand misgivings, scantily provisioned, and almost suffocated in their little prison. See the terror. The mad winds tear aloof the sails, the laboring masts reel from top to base, the little vessel rocks high on the billows, and the mighty waves sweep its deck. Hear the shouts as they behold the long



looked-for land. See them joyfully leap upon the ice-clad rocks of Plymouth, and, humbly bending, thank Almighty God for their deliverance. See their patience while enduring the cold, the famine, and the scalping knife of the savage. For them no undertaking was too hazardous, no labor too irksome, no sacrifice too great, to secure liberty and promote the welfare of the people.

Ye students of history ! tell me, if in all the great struggles for liberty in the history of the world, there is a sacrifice so great, an achievement so grand. Ye statesmen ! tell me how could a little band plant a republic so deep that the elements of nature and the thirty savage tribes could not root it up.

Caressed as Americans are by security and plenty, many do not appreciate the privileges they enjoy. Humanity has been struggling for six thousand years for the blessings you so trivially regard. Fly with me, upon the wings of imagination, back to those old Eastern Governments, and, gliding down the stream of time, view the condition of down-trodden humanity. As we unfold the moulded records of the past, we are horrified at the tale they tell of "man's inhumanity to man." Amid the splendors of Persia, during the ostentatious prodigality of her courts, the masses toiled and groaned worse than slaves. In her palmiest days, immortal Egypt, the land of the Ptolemies

and pyramids, the home of Clœpatra, the ever fruitful valley of the Nile, was a prison and a workshop for the toiling masses. Not here alone did tyranny reign supreme, but in the valleys of the Tigris, and the Euphrates, in Greece and in Italy; in all the nations that rose and fell in the great drama of the past. The masses everywhere avowed allegiance to some despotic and brutal monarch who continually carried on bloody and destructive wars. These monarchs were continually sacrificing the lives of hundreds of thousands of laborers upon some useless and vain-glorious works, such as the pyramids of Egypt and the embellishments of Babylon. The master had absolute control over the person and life of the slave. The masses had no right to land or personal liberty. Even our ancestors, the proud, fair-haired, blue-eyed Saxons, were bought and sold with the land for over four hundred years.

Under our Government you are not compelled to perform military duty. You are not compelled to come and go at the word of some despot. You do not have to pay half nor a tenth of your earnings to a licentious court. Your lives and the lives of your children are not sacrificed by the whims of a brutal tyrant. You have perfect control of your person and property. You have a free title to your lands. You have a deed, a precious deed, that gives you undisputed right to

your homes, where you can toil and accumulate, and lie down to enjoyment and repose, confident that no one dare molest or disturb. Let us see what genius and industry, under the benign influence of these blessings, have achieved.

## WATCHES.

The clepsydra was the first instrument for measuring time. It was a hollow cylinder, so graduated that the recession of the water readily marked the passage of the sun. The next instrument was the hour-glass, or sand glass. The watch originally was a bungling affair, and was moved by weights, and was suspended by a cord about the neck. About 1555 the spring was devised. The cases were five to six inches in diameter, and were very heavy. The average cost in those days was \$1500. The first to conceive and introduce machinery into watch making were Aron A. Dennison and Edward Howard, both of Boston, Mass. After some successful experiments, they associated with them Samuel Curtis, a capitalist, and made fifty eight-day watches. They next made 1000 thirty-hour watches. Since which time watches have been plenty.

## MATCHES.

The utility of fire is so great to mankind, and it is such an apparently inexplicable phenomenon, that there is no wonder tradition accounted it to be *a divine gift*. How man came in possession of it

is not known ; most probably by lightning or spontaneous combustion. Formerly the chief device for obtaining fire was the flint and steel. About 1650 it was discovered that phosphorus, by friction, would ignite the end of a stick dipped in sulphur. The first great improvement consisted in combining chlorate of potash with the sulphur upon the end of a stick, so that when dipped in sulphuric acid, the match was lighted. In 1829 an English chemist discovered that chlorate of potash would ignite by friction. The first patent for the invention of friction matches was granted to Alonzo D. Phillips, of Springfield, Mass., Oct. 24, 1836. His chemical mixture consisted of glue, phosphorus, chalk and sulphur. The manufacture of matches has been a great industry in the United States. The Government derives a yearly income of \$2,000,000 therefrom.

#### AXES.

Less than fifty years ago all our axes were hammered out by country blacksmiths. In 1830 Samuel W. Collins, of Hartford, conceived there was a large field of enterprise in the manufacture of axes, and commenced the business in a little shop. Now the shops of Collins & Co. employ 600 men, and make 3000 axes per day.

#### PLOWS.

The primitive plow was simply a bent stick, sometimes made of a limb of a tree and sometimes

of the body and a tough root, the lower end being hewed to a wedge. Among the ancient Britains no man was regarded qualified to be a farmer until he could make his own plows. The custom was to fasten the plows to the tails of oxen and horses and compel the poor beasts to thus drag them through the ground. An act was passed by the Irish Legislature in 1634, entitled, "An act against ploughing by the tails." In 1763 James Small, of Scotland, was the first to improve plows. In 1785 Robert Ransom obtained a patent for making cast iron plows. Thomas Jefferson, the third President of the United States, was the first to improve the plow in this country. Charles Newbold, a farmer of New Jersey, invented the first cast-iron plow ever made in America. He spent over \$30,000 in perfecting his plow, and then abandoned it in despair, as the farmers imbibed the strange idea that a cast-iron plow poisoned the land, injured its fertility, and promoted the growth of rocks. In 1807 David Peacock, of New Jersey, patented a plow similar to Newbold's. In 1837 Daniel Webster, the great statesman, invented a plow. The mold-board was of wood, plated with iron straps. It was twelve feet long, and cut a furrow fourteen inches deep and twenty-four inches wide. The next great improvement was the substitution of sheet-steel for cast-iron. In 1860 F. F. Smith, who had been

hammering upon sheet-steel plows in a prairie town of Illinois, had his attention attracted by the casting of steel bells in England; and he asked himself, why not cast steel plows? He went to the great firm of Collins & Co., and their best mechanics worked upon it a year and gave it up as a failure. Not so with Mr. Smith, for success justified his faith, and more than 400,000 of these plows are in use.

## PIANOS.

Twenty-five years ago but few pianos could be found even in the large cities, and the more wealthy were considered extravagant if they indulged in the luxury of a piano. Now pianos and organs are scattered all through the country, and range in price from \$50 to \$1500 a piece. More than 50,000 are sold in the United States annually. This is all due to American enterprise and industry.

## PRINTING.

The discovery of the art of letter-press printing is the glory of the fifteenth century. The giver of the art existed many centuries before, when the Egyptians engraved raised characters upon tiles, which were afterwards pressed upon soft clay tablets, which were then baked. Lawrence Carter, of Germany, is credited with the honor of discovering the art of letter-press printing. He communicated his discovery to John Guttenburg, who

was the first to cut type from metal. He afterwards cut matrices from which type were cast. In 1459 he printed the famous "Mazarine Bible." He exhausted his means in experiments, and died poor and unhonored. William Caxton carried the new art to England in 1474, and printed "The Game of Chess," the first book in London. In 1639 the first printing press in the American colonies was set up at Cambridge, Mass. It was procured by subscription (the Rev. Jesse Glover acting as agent) from Amsterdam, with forty-nine pounds of type. The first issue from this press was the "Freeman's Oath." On this press, in 1663, was printed the first edition of Elliott's Indian Bible. The type was wholly set by an Indian. It was three years going through the press, and was the first Bible printed in America. Stephen Daye was the first printer in America, and received a grant of three hundred acres of land. The first printing press was simply the lower end of a large wooden screw pressing upon the paper on the type. The first improvement was simply putting a heavy piece of plank under the screw to equalize the pressure. The Earl of Stanhope devised an iron press, combining the screw with the bent lever, and having a carriage for the form, and a spring which raised the platten and permitted the withdrawal of the form. In 1790 William Nicholson patented a cylinder press. Frederick

König, of Saxony, was the first to construct a cylinder press to run by steam. The London Times for Nov. 28, 1814, was worked at the rate of eleven hundred per hour on this press. Mr. Applegate built a press in which the type was placed on the surface of a cylinder. The printing press, especially in the United States, has been greatly improved. This advance is largely due to Robert and Richard Hoe, of New York. Their eight and ten cylinder presses are used in nearly all the great printing offices of the country.

## NEWSPAPERS.

The history of the newspaper really begins with the news letters circulated from hand to hand in England in the fifteenth and sixteenth centuries. The first printed journal in England was issued in 1622. The first daily paper appeared in London in 1702. Then others came in quick succession. The first paper published in America was in Boston in 1690, and was at once suppressed by the authorities. One number of the London Gazette was reprinted in New York the same year. The Boston News Letter was printed in 1704. The whole number printed in the United States the last year was 8,133; total number of copies, 1,318,459.214; number of copies for each inhabitant, 31. Americans are a news-seeking and a news-buying people. Every vocation and interest has its paper. It is



estimated that four papers start and one suspends each day.

#### NAVIGATION.

Steam navigation and locomotion is the step in the progress of mankind which separates the modern from the ancient world more clearly and distinctly than any other single difference in their industry or government. It has secured the circulation of the products of industry and of man himself, and widened his conception of the social, industrial and political condition of the rest of mankind. In 1736 Jonathan Hall published a description of a vessel which was to be propelled by a stern wheel, the motive power being an atmospheric engine. In 1773 Oliver Evans made a steam carriage which ran in the streets of Philadelphia, and a steamboat which was propelled on the Schuylkill by paddle wheels. In 1785 John Fitch navigated the Schuylkill in a steamboat. In 1787 James Rumsay navigated the Potomac in a steamboat. In 1807 Robert Fulton navigated the Hudson in a steamboat at the rate of five miles an hour. The first steam navigation of the ocean was by John Stevens, in the *Phoenix*. The first steamship to cross the Atlantic was built at New York, and made the trip in twenty-six days. The next trip was by the *Sirius* in seventeen days. The next by the *Great Western* in fifteen days. Now the waters of our great rivers are covered with those

splendid floating palaces which will accommodate a thousand passengers. How much more cheaply, rapidly and conveniently can we travel than could our fathers fifty years ago. It seems impossible that the next generation should see changes of equal magnitude.

## RAILROADS.

But few people imagine that the locomotive is quite a modern invention, and that railroads are quite an ancient institution. The Egyptians had something like a railroad for transporting the immense stone used in the erection of the vast pyramids. The first steam carriage was built by Coggan, a Frenchman, in 1763. The first idea of a railroad and engine was suggested by Thomas Denton, Feb. 11, 1800. Richard Trevethick caught the idea and built an engine in 1804, which drew ten tons of iron. The first railroad built in America was on the western slope of Beacon Hill, near Boston, by Silas Whitney, in 1807. The first locomotive that made a revolution of its driving wheel upon the American continent, was built by order of John B. Jerves, and a public demonstration of its power was made Aug. 2, 1829. The first railroad chartered in America for commercial purposes was the Baltimore & Ohio, the cornerstone of which was laid July 4, 1828. The Charleston & Hamburg was the second. It has always been the fate of great inventions that men of high

intellect not only distrusted their practical application, but discouraged all experiments that might demonstrate their success, yet the locomotive is the conqueror of distance and more miraculous and powerful under the control of man than the genii of the Eastern fables.

#### TELEGRAPH.

Of all the accomplishments of human study and genius, nothing can be regarded as more marvelous and important than man's triumph over space in the communication of news. The telegraph is truly an American invention. Prof. Jos. Henry, of Princeton College, discovered the power of electro-magnetism. This suggested the idea of a telegraph to Profs. Jackson and Morse. Prof. Gale and Alfred Vale, of Norristown, N. J., constructed the machine. Hon. F. O. J. Smith, of Maine, obtained the patent for Prof. Morse. We can not calculate the immense value of the telegraph to our present civilization.

#### CABLE.

Fifteen years ago Cyrus W. Field had gained considerable notoriety as a visionary, who was bent upon sinking his splendid fortune in the sea. Now he is a great man. At the age of thirty-four he had acquired an immense fortune in the mercantile business, and retired from active life. He soon became acquainted with Mr. L. N. Gisborne, of New Foundland, who came to New York to en-

list some capitalists in a news company between Great Britain and the United States. They were to use telegraphs between New York and St. John's, and fast steamships between St. John's and Ireland. Mr. Field conceived the idea that it would be better to lay a cable, and wrote to Prof. Morse and Lieutenant Murray as to its practicability. They answered him it could be accomplished. He spent twelve years, sunk all his fortune, and made fifty-three voyages to accomplish it. Five attempts were made before success crowned his efforts. Mr. Field never lost faith in its success, and his courage kept others inspired.

#### THE EXPRESS BUSINESS.

One of the most important advances of our modern civilization is the establishment of the express business, while the rapidity with which it has attained its present development shows the increased activity of the social forces of to-day compared with those in the world less than two generations ago. It is almost impossible to realize at present how the generation before ours managed to do without expresses. The difficulty in the way of promptly and easily circulating small packages was, of course, an insuperable obstacle in the way of much of the activity of our present commercial and social relations; and as a necessary adjunct to the railroad and the steamboat the express came into existence. In 1839 William F. Harnden, of

Boston, at the suggestion of some of his friends, advertised in the papers that he would make regular trips, as a messenger, between Boston and New York, by the Providence railroad, and the steamboat from thence to New York, and would take personal charge of such small packages or orders as should be intrusted to him. In accordance with this announcement, he made his first trip on the 4th day of March. This was the commencement of the Harnden's Express, and the beginning of the extension of the business, until it has finally encircled the world, and has its representatives in every town and village throughout the country. The year after the commencement by Mr. Harnden, in 1840, a competing express was started by P. B. Burke and Allin Adams, though the sole ownership and management of it soon passed entirely into the hands of Mr. Adams. About 1841 a third express from Boston to New York, by the Newport and Fall River line, was established by Gay & Co. Under the name of Wells & Co. the first express west of Buffalo was established in 1845. The estimated aggregate of the capitals of the various leading express companies is placed as high as twenty or thirty millions of dollars, and their ramifications extend all over the country.

## REAPERS.

*Whatever relates to the promotion of agriculture.*

the lessening of labor, and the facility of execution, must be of primal interest to the American farmer. The time-honored sickle, still in use, is the earliest known reaping implement. The first reaping machine of which we have any account was in the shape of a large cart, with projecting teeth on the edge, drawn in a reverse position by an ox. The first patent for a reaping machine in England was obtained July 4, 1799, by Joseph Boyce. In 1822 Henry Ogle, a schoolmaster of Remington, invented the first reciprocating cutter. Some working people threatened to kill the manufacturer, and it was abandoned. In 1826 Rev. Patrick Belle invented the oldest known machine still in use. Although doing successful work, this machine did not attract much attention, as it was lost sight of until the great exhibition in 1851. The first American reaper was patented by Richard French and J. T. Hawkins, of New Jersey. Obid Hussey patented his machine in 1833. As it was successful from the first, and is still in use, it contained nearly all the main features of those now in use. Now we have machines that not only cut and bind, but thresh it as they go.

#### SEWING MACHINES.

The sewing machine is due entirely to American enterprise and ingenuity. The earliest patent for a sewing machine to facilitate the process of sewing was granted in England, July 24, 1755, to

Charles F. Weisenthal, for embroidering. On Feb. 21, 1842, James Greenough obtained a patent on a machine to sew a straight seam. Sept. 10, 1846, Elias Howe patented his machine. This was the first practical machine for sewing. Howe toiled and studied with poverty and sickness for many years to devise and perfect his machine. He carried the invention of the sewing machine farther towards its complete and final utility than any other inventor has ever brought a first-rate invention at first trial. Since Howe's patent one thousand patents for sewing machines have been issued. The cost of making the first machine was \$500, now they can be made for \$15.

#### INDIA RUBBER.

While admiring and paying homage to American genius, let us not forget the most deserving, the one who fought his way through adversity, single-handed and alone ; the greatest one of them all, Charles Goodyear. In 1735 a party of French astronomers discovered a tree in Peru that yielded a peculiar sap. It was taken to Europe and regarded as a mere curiosity. The natives used it in the manufacture of some simple articles. In 1820 a pair of India rubber shoes were exhibited in Boston. It soon became very fashionable to wear rubber shoes in wet weather, and great preparations were made for their manufacture, but the goods froze in winter and melted in summer, and

millions of dollars were lost. The whole thing was pronounced a humbug and a failure. A bankrupt merchant of Philadelphia happening to be in New York, purchased a life preserver. The valve not working well he devised a better, and endeavored to sell his apparatus to the agent of the India rubber company, who informed him of the true condition of their goods, and urged him to discover a process which would render rubber goods durable. Goodyear went to work and made some shoes, but they melted. He experimented with unflagging energy for years, until his property was gone and he had to pawn some linen, which his wife had spun, for rent. Success often seemed in view, yet as rapidly disappeared. While bronzing a piece of rubber cloth he applied some aquafortis for the purpose of removing some bronze from a certain point. In a few days he discovered that the effect of the acid was to harden the cloth so that it would stand a degree of heat which would have melted it before. In this way he managed to manufacture enough of cloth to cover him. A friend of his said, "If you see a man with an India rubber coat, India rubber shoes, India rubber cap, and India rubber pocket book and not a cent of money, that man is Charles Goodyear." So far he had achieved but little, chance was to make the revelation. Standing before a stove one day, explaining to some men the properties of a piece of sulphur-cured



rubber, suddenly he dropped it on the stove which was red hot. His old clothes would have melted instantly, but to his surprise this piece underwent no such change. This was of no importance to the bystanders, but to him it was a revelation. This was in his darkest days. Soon a terrible snow storm came, and he made the discovery that he had not a particle of fuel or a mouthful of food in the house. His neighbors had helped him so much they had become vexed and left him to his fate. In this extremity he thought of a mere acquaintance several miles distant, who, he thought, would aid him. Feeble and sick, though nerved by despair, he set out through the drifting snow. Often he fell prostrate in the snow, almost fainting with fatigue and hunger. Reaching his destination the friend heard his petition and relieved his wants. Seeing no prospect in Massachusetts he started for New York. Reaching Boston on foot he was arrested for debt and thrown into prison. Having obtained his liberty he walked the streets nearly all night. He then walked wearily home. Reaching the door he found his youngest child was dying. In a few hours he had a dead child but not the means of burying it, and five living dependents without a morsel of bread to give them. The next day the family followed on foot the remains of the little child. He had reached the lowest ebb of his misery, and a brighter day was in store for

him. He borrowed \$50 and went to New York, where he enlisted William and Emery Rider in his discovery. The Rider brothers failed, but he had advanced his experiment so far that Wm. DeForrest advanced him \$46,000. Goodyear was cheated out of his discovery and died poor. Yet he lived to see factories employ 60,000 operatives and produce five hundred different kinds of articles. He lived to see boots, shoes, hats, caps, clothing, articles of commerce and of pleasure, mechanical, scientific and surgical instruments made of the material, the discovery of which cost him long and sorrowful years of toil and anxiety. He lived to see his name praised by millions, and to know that though sharpers had robbed him of his patent, they could not rob him of the honor.

TELEPHONE, PHONOGRAPH AND MICROPHONE.

Among the most startling inventions of this country may be classed the telephone and phonograph. The phonograph receives the waves of sound upon a metallic diaphragm (for sound is nothing but a series of regular vibrations or waves) and by means of a steel point it impresses them permanently upon a sheet of tin-foil. By properly arranging the apparatus the vibrations are re-transmitted from the tin-foil to the instrument, and these being communicated to the atmosphere the sound is re-produced. The telephone differs from the phonograph in that the sound waves are first

transformed into electric vibrations. These are transmitted along a telegraph wire to any given distance, and there are re-transformed into sound waves and are thus rendered audible. It is necessary to transform the sound waves into magnetic waves because owing to the tension of the former they can not be transmitted to any great distance. The phonograph is supposed to be able to repeat a speech after twenty-five or fifty years have expired. The microphone is a round trumpet-shaped instrument, for amplifying sound. So that the hum of a mosquito may be rendered as loud as the roar of a lion. Before many years I hope to see a phonograph and microphone placed in the steeple of the court house, that at sunrise will sing "Hail Columbia," and repeat the Declaration of Independence in tones sufficiently loud to be heard ten miles distant.

#### AIR ENGINE AND AIR SHIP.

There are two inventions yet to be made practical. One is to send freight by means of atmospheric pressure. There is a machine of this kind in London by which the mail is transmitted through portions of the city. The other is an air ship. Prof. C. F. Richell, of Hartford, Conn., has very nearly succeeded in making a successful air ship. On June 12, 1878, he ascended over 200 feet, and encountering a gale returned to the same place from whence he started. On the 13th he went over 1000

feet high and over ten miles in distance, and returned five miles and encountering a gale descended safely. I think it safe to predict that air navigation will be successful in twenty-five or fifty years.

These inventions and improvements are only a small part of the progress of this country. We can scarcely conceive its capacities and resources, nor predict to what greatness it may attain. There is New England with her granite hills and numerous water-falls, affording wonderful facilities for building and manufacturing purposes. The sunny South, the land of the magnolia and the mocking bird, with her vast extent of cotton and cane, sufficient to clothe and sweeten the world. The great North, in extent like a continent, in beauty and fertility the most perfect garden in the world, with her vast fields of wheat and corn. The broad and mighty West, with thousands of immense herds grazing upon so many hills. The great Pacific slope, producing as it does the product of every clime. The rich and flowery praries, now untilled, yet so fertile that if you will but tickle them with a plow they will laugh with a rich harvest. The Alleghany, Rocky and Nevada mountains, rising as great refrigerators to condense the vapors and give life to vegetation, and birth to our mighty rivers; serving also as repositories for the useful and precious metals so essential to the comfort and

decoration of man, and with the fascinating and picturesque scenery ministering to the love of the beautiful and sublime. The great Mississippi, rising in the cold regions and flowing through every variety of climate, is the channel of conveying a corresponding variety of products, and is the scene of the most active internal commerce on the globe. Our scenery embracing every variety, from the dazzling brilliancy of northern snow fields to the celestial beauty of southern fruits and flowers. Our climate conducive to physical and intellectual power, and eminently favorable to the growth and development of a great and powerful people.

Who can tell the hight and depth and magnitude of the learning, resources and power of this republic, when our broad prairies and mountain slopes shall be populated with an active and enlightened people, and become the home of industry, virtue, liberty and happiness? The sun in his beneficent course around the world beholds no sight so glorious, no object so grand, as a free government administered with justice for a virtuous and happy people. It will thus be a happy sight to see virtue and liberty rebuking the haughty spirit of despotism and animating the generous aspirations of freedom.

My heart swells with pride and exultation when I contemplate our wonderful country and its immense resources; but shrinks with pain at the

thought that individual influence, public distrust and party vices may rob us of its blessings. We have all the material and political elements of liberty, prosperity and happiness. Our laws are mild, our taxes light, our schools free, our press independent, our religion unfettered. Our greatest danger is that our people will become influenced by the vices and luxuries of the age, that sordid avarice and rankling hate will smother the fires of patriotism and devotion to country. Standing upon the high eminence of literature and learning which we occupy, and with the light of the noon-day of the nineteenth century, it would be beneficial for us to look down the dreary past and study the fate of other republics.

The first human government in which God interposed secured personal liberty. The people received the ten commandments and a system of laws from God's own hand. Under their benign influence agriculture and commerce flourished. Life, liberty and property were secured and the people were prosperous and happy. They lived in the immediate presence of Jehovah and boasted that Divine power would protect their government. But soon the people grew rich. They became proud and ambitious by unbounded wealth and overflowing prosperity. The violent impulses of unrestrained natures plunged each generation deeper and deeper into vice and crime. The disobedi-

ent sons of Samuel forgot that which God himself had taught them, and liberty took her flight to more genial climes. That land of Divine favor, that land upon which was enacted the sublime tragedy for the redemption of man, was left in darkness. The christian world has revered that land for three thousand years, yet no power has ever revived her institutions or restored her proud estate.

Turning from that sacred land to the republic of Greece, what lessons do we learn of human greatness and human weakness and folly? Her Athens was the light of the world. There was the temple of learning, the studio of the artist, the home of philosophy. But her people became wealthy. Honor and virtue were dethroned, and vice and corruption ruled supreme. They ceased to watch with vigilance the citadel of their liberty. Discord and dissension spread through the land. Brother arose against brother, and Greece fell by the hands of her own sons. What a lesson for him who labors under the delusion that because we are intelligent and free our institutions can not be destroyed.

Rome presents a similar lesson. Her deeds of greatness and of glory are familiar to every school boy. The Romans lost their liberty not because Hannibal laid waste their fields, not because the Goths and the Vandal swarmed over their plains

and assaulted their gates, but because they too became corrupt. The love of country was smothered by the lust of power and plunder. With perfect indifference they saw one pillar of liberty after another torn away, and that base act was punished by the despotism of one man. Rome, the arbiter of nations, the proud mistress of the world, became the slave of the barbarian and the servant of the priest.

Brave and peaceful Switzerland alone remains. Her poverty, and not her wealth, is her guarantee of freedom. She has nothing to excite the cupidity of man. Too poor for plunder and too rough for conquest. Her mountains present eternal barriers to wanton ambition.

What solemn warnings the past conveys us in the murmurs of her uneasy slumbers. The masses fought as tyrants dictated. They slaughtered each other for plunder, while liberty lay bleeding without a friend. How dear should we hold our written constitution. With what nervous anxiety should we watch our liberties. A little vigilance now may save us a great conflict in the future. In one of those convulsions of the past, when Leonidas and his Spartan three hundred were defending their country against five hundred thousand Persians, and the arrows of the swarming hosts flew so thick as to darken the sun, one of the noble band said to Leonidas, "See, the arrows fly so thick as



to obscure the sun." "So much the better, we can fight in the shade," was the sublime reply of the valorous leader. If the Spartan could fight with such cool determination in defense of his little country, ought we not to protect ours, while we can do it in the shades of security and plenty.

That prophetic sentinel on Horeb's heights, in the sacred hills of Idumea, when he cried out, "Watchman, what of the night?" felt no more solicitude for the interests of Israel's hosts than should every American feel for the welfare of our common country and our coming generations. Our republic to grow and flourish must retain and nourish republican virtues. We must practice economy, temperance and fidelity. We must protect our free schools and promote a rigid public virtue. Fathers, as you love your homes, as you love your children, as you love your country, resist every effort to fetter your public schools. Oppose every attempt to smother public virtue. Mothers, teach your children, as they prattle at your knee, to love that flag, to be true to their country, to revere the teachings of their fathers, that they may prove worthy of their inheritance and act well their part in securing for this republic a noble and imperishable destiny.

## STRAY THOUGHTS.

## HOPE AND HAPPINESS.

Life is short. Time is fleeting. Life is checkered sunshine and shadow. Time brings joy and sorrow, prosperity and adversity. Amid the ever changing scenes of life some always appear cheerful and happy. This is wisdom's greatest philosophy. But the major part of mankind have their days of gloom and melancholy. Many a person, when returning from his daily toil, weary and sick at heart, feels that his life is a failure. He fears that the youthful anticipations of a prosperous and happy future are never to be realized. He feels all alone in a cold and heartless world. Perhaps he is far away from those to whom he is bound by nature's tenderest ties. No kind friend to comfort him; no fond brother to encourage him; no loving sister to cheer him; no father to advise him; no mother to bless him. Then he sits down surrounded by his little all and is lost in contemplation. Under such circumstances what a medley this life presents! The grief of the mourner and the joy of the bride; the pain of the wicked and the pleasure of the good; the misery of the idle vagabond and the happiness of the industrious laborer. He views the palatial residence of the millionaire, with its

stately walls and beautiful courts, surrounded by green swards, pebbled walks and sparkling fountains. He sees him mount his silver-tipped carriage, and speed away with an air that bids defiance to care or grief. In an obscure nook he sees a shabby hut, occupied by a penniless widow and her hungry, ragged children. Her manners indicate better days, but now she is broken-hearted and almost distracted. With a stingy hand she adds a few scanty sticks to an already waning fire, and with quivering lips and chattering teeth she mutters: "'Tis hard to be poor." He sees around him many not so rich—a few not so poor. He sees the prosperous business man, the tippler, the bankrupt, the debauchee, the mendicant, the felon.


In all these phases of life there is a gem within the soul that ever allures the uneasy man. There is a haven for which he is ever seeking. That gem is Hope; that haven is Happiness. Delusive hope! Unfounded happiness! When ambition first led man to invade his brother's rights, hope was there to deceive him; when the wily serpent first played his cunning trade and the taste of that forbidden fruit brought death into the world and all our woe, it was there to allure man with its false promises. Hope has ever been the constant companion of man. It is well that it is so. When the chilling blasts of adversity blow fiercest against him; when the dark clouds of despondency hang

thickest over him, hope still waves her alluring pictures high above the clouds, enticing him onward to the haven of happiness in the dim, uncertain future. Hope, to allure him onward and upward, serves him a noble purpose; but without judgment will it suffice? How many live and act without thought of their being or study of their duty! Without reason and judgment to guide their actions, the stimulous of hope is powerless. Why so much failure and misery in the world? Did not God create man in his own image, symmetrical in form and wonderful in mechanism? Did he not give him the five senses and endow him with the power of thought and reason? Is not much of his misery owing to his failure to properly cultivate those powers and to properly restrain his passions? If the great mission of man is to eat, sleep, and hoard away his gains, what is he? A miserly beast, nothing more. To find how he can accomplish the most good, in what vocation he can be the most prosperous and happy, is the great problem of his life. Education, in accordance with the evangelical laws of the christian revelation, is his only true assistance. Education increases the productiveness of labor, diminishes pauperism and crime, avoids the evils of vice and secures the only true elevation of the race.

## FOR THE YOUNG.

The difference between the mind of him who spends his leisure moments in vacant thoughts or silly twaddle and of him who spends them in studying nature or in the companionship of some useful book, may be illustrated by comparing them to the different views of one in search for the beautiful in nature. He seeks a picturesque landscape and travels until he finds a nicely ovaled hill. He ascends to take a view. To the right he sees a cluster of green luxuriant foliage; to the left a little brook rippling over its pebbled bed, in front a flowery sward. Farther out and all around is fog, deep and thick. He sees no more beauties; but through an opening in the fog he sees a mountain whose sun-tipped top glistens above the clouds. With weary steps he ascends its rugged steep. He turns to take a view, and to his surprise the mist and fog have disappeared. He sees the green foliage, the thick-leaved bush, the giant boughs of the mighty oak waving majestically in the breeze, and the green-tinged hills fading gently into the distant blue. He sees a mighty river whose waters flow calmly out of view, and a vast prairie teeming with luxuriant growth, the whole presenting a scene at once beautiful and grand.

*Let the unlettered mind ascend the hill to whose*



top a knowledge of the eight common branches will lead it. It sees many beautiful things, but its view is confined within a narrow circumference. Without all is mist and fog. Let it climb the mountain of science and view the beauties of philosophy and chemistry, range through the vast fields of law, medicine and theology, climb the mathematical heights of calculus, mechanics and astronomy—then it will have a broader view and a grander sight. It is evident that a man enlightened by such views feels exquisite joys, to which the other is an entire stranger. It was always a mystery to me why men should be so industrious, so assiduous and so strenuous in accumulating wealth when it was evident that it would bring but a temporary happiness, while at the same time they neglected entirely the cultivation of their minds, which would conduce to their happiness forever.

Young reader, be not of that number who believe the mind of man like the instinct of an ox—that when the body dies the mind dies with it. Rather be of that number who think the mind of man is immortal; that it can say to the lofty mountain, “I am greater than thee, for I shall be when thou shalt have melted like wax;” that it can say to the stars, “I am greater than thee, for I shall be when thou hast been snuffed out;” that it can even say to the sun, “I am greater than thee,

for I shall be growing brighter and brighter when thou hast faded away." Young reader, your prosperity and your future happiness depend upon your actions now. Pluck the wings of imagination, fling away all frivolities, marshal your courage, and crown reason king of all; then retire into the secret cabinet of the soul and there debate with logic and discretion the means of true happiness. Be not seduced, from slow and steady steps towards success, by fancy flights to swift renown. Never depend upon the inspiration of genius. Genius makes extravagant promises, but seldom fulfills them. Its scintillations may be beautiful and attractive; but, like the rainbow, they are based upon mist and disappear with the ray that produced them. Your mind must gain information by its own exertions, and it must grow by its own efforts. There is nothing fitful nor erratic about the great mind. Morning and evening find it sprinkling the dews of its diligence in copious effusion upon all its labors. If you would be successful and happy, select, while training for the great battle of life, the side of justice and morality. Choose as your guide that star which is high in the scale of nobility and virtue. Keep with diligence from the bewitching sources of evil habits. Make moral courage a marked development of your character; and resolve, even when chill *perjury* freezes the genial current of the soul, to strug-

gle with iron will for the jewels of knowledge, the adornment of the soul.

## THE UNTUTORED MIND.

What is the condition of the man whose mind is enshrouded in darkness? He grows up like a beast, without one true conception of life, or a single exalted idea of its obligations. He uses his physical powers because their use is necessary for his subsistence. Perhaps he has learned to read, but he has never applied it to the acquisition of knowledge. During the long winter evenings he sits around the fire and gazes upon it with a vacant stare, almost as stupid as the gaze of a cat, talks foolish talk, and rehearses the common tattle of the neighborhood. He can form no conception of the picturesque landscapes, the beautiful scenes, the splendid ruins, or the wonderful productions of other lands. He knows nothing of the habits and customs of other people. His mind is confined within the narrow limits of his own neighborhood, or circumscribed by the horizon which skirts his own blue hills. He knows nothing of the physical condition of other countries, and their islands, lakes, rivers and mountains. He knows little about the mighty productions of other men, little of the discoveries of science, and little of the wonderful machinery used in the manufactories of the country. He knows little of the laws of nature. He beholds the



heavens and thinks it nothing more than a canopy for the earth. He never asks himself which are stars and which are planets. So long as the sun shines, the moon sheds her mellow light, and the clouds sprinkle their waters over the thirsty fields, he takes no concern. He takes no pains to make his home pleasant and attractive, nor does he make any effort to improve the implements and machinery with which he works. He opposes every innovation, ridicules every new invention, and makes war upon those who attempt to improve the community in husbandry, education, or morals. Were they under his control the agricultural, mechanical and moral world would stand still, as the material world was supposed to stand in former times. Under his control no improvement in science or art would ever be made, no invention conducive to the happiness of man would ever be discovered, the evils of depraved passions would never be controlled, and the race would never rise above the sensualities of the baser world. He is left a prey to all the foolish notions and vain alarms which ignorance and superstition engender. While he gorges his mind with such nonsense, he spurns with contempt all the revelations of science as absurdities too extravagant for credulity to entertain. It is evident that such a man can never experience that high and lofty pleasure and feast of the soul that *the man of science and learning* enjoys, nor can he

form that high estimate of the Deity which the grandeur and magnificence of His works present.

## THE CULTURED MIND.

Let us now consider the man whose mind is irradiated with the light of learning and science. He feels those pure and exquisite joys, almost a kind of inspiration, to which the other is an entire stranger. He enjoys that tranquility of mind which is always associated with literary and scientific pursuits. By the enlightenment of his mind he is introduced into a new world, with new scenes, new objects, and new movements constantly presenting themselves for his study and contemplation. In imagination he can wing his way back to the source of time, and gliding down its stream he can survey the various changes of nature, both in vegetable and animal life, from the lichen to the sensitive plant, from the polyp to the wonderful man. He can view the scene when the sun of enlightenment burst from behind the cloud of mental darkness then hovering over the earth. He can behold the rise of kings, the fall of empires, the revolution of nations, the birth of republics, the struggles for liberty, the judgment inflicted on wicked nations, the rewards of the good, the punishments of the wicked, together with all the mighty events that have taken place from the beginning of time to the present moment. He can form some con-

ception of the beautiful landscapes of Africa, the ancient ruins of Egypt, the diversified scenes of Asia, the wonderful sights and busy rush in the crowded cities of Europe ; in fact, all the scenes of the entire globe—its caverns, deserts, plains, valleys, mountains, lakes and rivers. In hours of solitude, in which the unlettered man finds no charms for his vacant mind, the enlightened man can not only amuse himself, but experience hours of rapt enjoyment in contemplating upon other nations and other people ; their habits, customs, peculiarities and modes of life ; their trades, commerce, religion, laws, and standing among the nations of the earth. He can amuse himself by studying the refraction of light which gives us our evening and morning twilight, and meditating upon the beneficence of a kind Creator in not ushering in day and night as quick as a flash of light ; by thinking of the earth flying through space at the rate of seventy thousand miles an hour, or nineteen miles a second ; by studying the cause of the ebb and flow of the tide, and the cause of the eclipse of the sun and moon. With his telescopic vision he can wing his flight to the moon and survey her broken and irregular ridges, deep craters, silent volcanoes and lofty mountains. He can go from there to Mars, from Mars to Jupiter, there grow weary travelling over his diversified surface fourteen hundred times larger than our earth ; from thence to

Saturn to view his immense ring, thirty thousand miles in breadth, in addition to his eight satellites, which constantly revolve around him ; from thence to Neptune, from Neptune ranging through the vast dimensions of space, to find that those little lights, which we with the naked eye suppose to be stars,, are suns a thousands times larger than our sun, around which revolve a million worlds immensely larger than our own. Then for the first time does he comprehend the meaning of the Psalmist when he says, "The heavens declare the glory of God, and the firmament sheweth his handiwork ; day unto day uttereth speech and night unto night sheweth knowledge."

## EDUCATION VS. IGNORANCE.

To convince the most obdurate and penurious of the advantages and importance of education, it is only necessary to contrast the Caucasian with the other races of mankind. The one is civilized, enlightened, christian, generous, prosperous, proud and independent ; the others are ignorant, barbarous, superstitious, debased and brutal. The advantages of education may be more forcibly demonstrated by taking for an example an educated and an uneducated mind of our race. It is no difficult problem to tell which has the greatest advantage in the struggle of life. It is true that the educated man and the uneducated man are com-

pelled to resort to manual labor. This is as it should be. Honest employment is no disgrace, while idleness is a reproach to any man. The force of uneducated muscle is but brute force, and the least in demand. Unskilled labor always commands the least compensation. On the other hand the force of educated muscle is always in demand, and commands an increased rate of compensation. This is not the only difference. Uneducated muscle never reaches beyond the station occupied by machinery. The unskilled laborer makes himself an inferior from his incapacity to harmonize in sentiment and intelligent intercourse with the minds that control his actions. The leisure time he can spare from toil is not to him a season of mental pleasure, not a recreation of the physical powers by a pleasing entertainment of the mental. The uneducated are incapable of the enjoyments in store for cultivated minds, hence their associations are not congenial.

Each of these classes must have their seasons of rest. They may labor for the same end, but when they seek diversion one will go in quest of those who with him have a unity of thought, intelligence and refinement; the other will seek excitement in some ribald crowd, where thoughtless men most do congregate, and, once in his congenial circle, is led by the affinity of nature to engage in useless *gabble*, cards, and sometimes drink. Thus the

educated are separated from the uneducated in their social enjoyments. This alienation is often attributed by the thoughtless to pride and ostentation on the part of their brethren. Upon reflection the simplest reasoning would attribute it to the incompatibility of their mental qualifications.

Education is not confined to books, but is rather a proper exercise of the mind. The artisan and laborer may, by properly applied thoughts, elevate his vocation into an intelligent science or ennobling art. Labor, however constant, not directed by intelligence, controlled by reason, or stimulated by a rational hope of reward, is nothing more than mechanical force. Education is the straight and narrow path through which man must travel in his career upward and onward through life. It is the fountain of happiness, the food of the soul. Through it comes the only glimpse the earthly pilgrim has of heaven.

#### OF WHAT USE ARE MOUNTAINS ?

Air is composed of oxygen and nitrogen. These particles are in the form of globules. These globules, when heated, expand, and their interstices become larger. Water is expanded by heat and made light. It then rises in the form of vapor, fills these interstices, and is carried away by the wind in form of clouds. As the air becomes warmer its interstices become larger, and its

capacity to hold moisture increases ; and as the air becomes colder its interstices become smaller and its capacity to hold moisture decreases. The higher the elevation, the lower the temperature. The higher mountains rise the lower the temperature of their tops. Wind blowing over the tops of mountains becomes very cold, and when coming in contact with clouds the interstices are contracted, the vapor condensed, and it then returns to the earth in the form of rain, snow, or dew. If there were no mountains the clouds would pass over the land without depositing an amount of rain sufficient for the preservation of vegetable and animal life. When clouds pass into the atmosphere which surrounds the cold summits of mountains their vapor is condensed and falls in the form of rain which supplies springs and streams of elevated regions. Mountains where tops are perpetually covered with snow, cause vast quantities of rain to fall on the windward side, while on the opposite side rain is almost unknown. Were the Andes on the eastern side the rain would fall in torrents upon the short Atlantic slope, and South America would be deprived of its immense rivers, dense forests, and fertile plains, and become a sun-burnt waste. The highest mountains are found in the Torrid regions, where the greatest amount of rain is required. The tops of these mountains are covered with snow which temper the heat in the plains be-

low, which otherwise would be very oppressive. If the continent of North America were deprived of its mountains, the change effected in the climate would render the now fruitful plains unfit for the abode of mankind. The great desert of Sahara has no mountains to condense the thin and invisible vapor which floats over it. Mountains are not only useful as great refrigerators of the globe, condensing the vapor and cooling the atmosphere, but also are depositories for the minerals and precious metals. Their rugged barriers form natural boundaries between political communities, and their fastness have ever been the asylum of Liberty. Mountains occupying such positions of usefulness to earth and to man, stand as monuments, not of the Creator's power alone, but also of His wisdom and goodness.



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